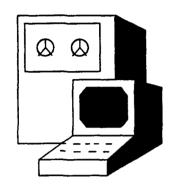AD-A255 775

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**BUREAU OF NAVAL PERSONNEL**
**NAVY OCCUPATIONAL DEVELOPMENT AND ANALYSIS CENTER**

## OFFICER COMPUTER UTILIZATION REPORT

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Computer utilization at all levels within the Navy continues to grow exponentially. This study examines naval officers' involvement with all levels and types of automated resources. A Navy-wide officer survey was conducted by the Navy Occupational Development and Analysis Center in the second quarter of FY91. The survey was mailed to a random sample of naval officers stratified across 35 officer communities and proportionated by the ranks of chief warrant officer to captain. For purposes of this study, the findings represent the sample. Descriptive statistics were used to interpret the data. The findings underscore the importance of computer literacy as an entry level skill for officers in all fields as well as the need for standardization of software packages.

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# EXECUTIVE SUMMARY

The purpose of this study was to describe officers' involvement with all levels and types of automated resources, as requested by the Director, Department of the Navy Information Resources Management (DONIRM). Study questions were directed at: who is using ADP resources; what types of hardware and software are being used; to what end are these resources being applied; and the relative time spent in ADP efforts.

Answering these questions was accomplished by a Navy-wide officer survey in the second quarter of FY 91. The survey was mailed to a random sample of 10,923 officers drawn from an eligible population of approximately 61,000. The sample was stratified across 35 officer communities and proportionated by the ranks of chief warrant officer to captain. A total of 6,764 responses (62%) were returned. For purposes of this report, the findings represent the sample. Descriptive statistics were used to interpret the data. A one-page summary of the findings for each of the 35 officer communities is found in Appendix B.

Some type of computer was used by 88% of the respondents in their jobs. An additional 7% had access to some type of computer but reported no use, while 5% lacked access to a computer. Officers in all fields reported computer usage, with the highest usage reported in the Manpower, Personnel, and Training field. Microcomputers were the most frequently used hardware, while word processing, graphics, spreadsheets, and database management were the most popular software packages. Use of communication packages was reported by approximately 20% of the respondents.

The findings underscore the importance of computer literacy as an entry level skill for officers in all fields, as well as the need for standardization of software packages. This standardization, if officially adopted, might contribute to increased productivity by decreasing retraining requirements and increasing system compatibility between commands. Additionally, the specific utilization patterns have ramifications for both training and computer asset allocation in an environment of constrained resources. With shrinking budgets a reality, it is important that assets be carefully matched to user needs and that users receive training which allows them to derive full benefit from assets available. The area of communication interface may be a particularly fruitful one for consideration as information sources proliferate and travel dollars decrease.

## I. Purpose of the Study

### Authority

The Navy Occupational Development and Analysis Center (NODAC) is chartered by the Chief of Naval Personnel (Pers 00) to identify occupational requirements; determine specific tasks performed by job incumbents; analyze and compare tasks performed by members of an officer community; and report the findings to the appropriate authorities (e.g., resource sponsors, program planners, and manpower, personnel, and training [MPT] managers).

### Objectives

As requested by the Director, Department of the Navy Information Resources Management (DONIRM), the primary objective of the Officer Computer Utilization (OCU) Study was to determine officers' involvement with levels and types of automated resources. Intrinsic to this objective was a delineation of who was using which ADP resources, the functional areas being supported by ADP resources, as well as the relative time spent using these resources in mission accomplishment. The secondary objective was to establish a basis for DONIRM to consider changes which may be needed to accommodate our increasing reliance on computers.

### Assumptions

- The reported data in this study reflect a broad spectrum of information that includes all officer designators and grades.

- All anecdotal and mail survey data were accurate assessments of the respondents' current billet assignments.

### Limitations

The findings reported are not to be generalized to all officers within the cited designators, general officer categories or grades unless specifically stated.

## Questions

The questions addressed in this report are the following:

1. Who is using ADP resources? Are these resources being used directly or indirectly?

2. What is the relative time spent in ADP efforts?

3. What types of hardware are being used?

4. What types of software are being used?

5. To what end are these resources being applied?

## Glossary

**ADA** - DOD standard programming language which is named after Ada Augusta.

**ADP** - Automated Data Processing

**DONIRM** - Department of the Navy Information Resources Management

**Interface software package** - Allows the computer user to move from one software application to another through use of menus or different screens.

**Integrated Real-Time System** - A system that uses a combination of processes to coordinate data processing with external related physical events on a timely basis, thereby permitting reporting on conditions promptly (e.g. Shipboard Non-tactical ADP Program (SNAP),Navy Intelligence Processing System (NIPS), Retail Operation Management (ROM)).

**Mainframe** - An extremely powerful computer capable of handling many different jobs at the same time. It allows as many as several hundred people to carry out computing work simultaneously.

**Microcomputer** - A machine based around a microprocessor or "silicon chip". It consists of three parts, a central processing unit (CPU), a monitor and a keyboard.

**Minicomputer** - A midrange computer system designed for multiple users; provides greater speed and storage than microcomputers.

**Missing or invalid data** - Number of respondents who did not respond to a survey question or answered the question incorrectly.

**N** - Number of members in a population.

**N** - Number of total members in a sample population.

**n** - Number of respondents in a sample population.

**n** - Number of respondents in a limited portion of the total sample.

**Supercomputer** - The fastest and most expensive computer available, used, for example, in designing aircraft, weather forecasting, and research.

**Technical/Tactical System** - A computer designed for a specialized purpose i.e., fire control, patient monitoring, navigation.

**Technical Workstation** - A high performance micro or mini computer specialized for graphics or design.


## II.  Background of Study

In April 1989, DONIRM requested NODAC conduct a Navy-wide occupational survey to determine officers' involvement with all levels and types of automated resources.  In response to this request, NODAC, in conjunction with the Staff of the Director, Naval Communication/Information Systems, developed the Officer Computer Utilization Survey (OCU).  A copy of the survey instrument is provided at Appendix A.


## III. Methodology

### Survey Design

The Navy officer community was defined by designator, billet classification, and selected other demographics. The methodology used to assess the officer community was an occupational survey process known as the Navy Occupational Task Analysis Program (NOTAP).  The survey was divided into seven sections:  Billet Information; Personal and Job Background Information; Education, Training, Knowledge, and Experience; ADA Programming Language; Current Computer Usage; Microcomputers; and a Job Task Inventory.

Background characteristics of respondents included those which are standard to officer NOTAP surveys (e.g., designator, grade, and subspecialty code). In addition, the survey contained 52 "special interest questions" and 178 computer-related job task statements. The special interest questions were provided by two sources: a) the Staff of the Director, Naval Communications/Information Systems, and b) responses to NODAC's request for input from the fleet in June 1989. The job task statements were developed from existing computer-related task lists used by the military services and inputs from Navy subject matter experts working in computer fields.

The survey instrument was pretested to ensure its accuracy, completeness, and proper format. Norfolk, Virginia and Washington, D.C. were the two major sites selected to ensure the participation of officers across communities and in a variety of commands.

## Sample Selection and Data Collection

For purposes of this study the Navy's officer corps was divided into 35 communities. These communities are presented by designator in Appendix B. The sample was selected from officers in the ranks of Captain (CAPT/O-6) through Chief Warrant Officer (CWO2/W-2) assigned to both sea and shore commands. This population did not include personnel in training or in other forms of transient status. The sample was stratified by community and proportionated by rank. The sample size was calculated to provide a 90% confidence level with 5% error (i.e., there would be a 90% probability that any statistics calculated on these samples would approximate those of the total population in that community, within plus or minus 5%).

In July 1990, the survey was mailed to a random sample of 10,923 Navy officers (N) from an eligible population of approximately 61,000 (N). The number of surveys mailed allowed for a 65% return rate. A total of 6,764 (n) responses (62% of the surveys mailed) were returned.

For several reasons despite these sampling efforts, caution was used in relying on confidence intervals and in applying them to the population of officers. It was difficult to determine whether the characteristics of the nonrespondents were the same as the characteristics of the respondents. Traditionally, the NOTAPs were directed at homogenous populations such as Aviation or Surface Warfare officers. For example, in the Aviation community the survey design was such that both the nonrespondents and respondents had common characteristics of belonging to the Aviation community. In administering the OCU, there was a strong likelihood that the respondents would have a higher proportion of computer users than the nonrespondents. Thus, the resulting sample would over-represent the amount of computer usage, if the calculated statistics were applied to the population as a whole. For purposes of this report, the findings represent only the sample.

The data were coded, stored on computerized data tape, and processed using the Statistical Package for the Social Sciences (SPSSx). To achieve the purpose of this study, descriptive statistics were obtained (i.e., frequencies, means, standard deviations) for those special interest questions which provided information relevant to the analysis requested by DONIRM.

Background data were collected in three groups: information about the billet (e.g., billet designator and grade), information about the officer (e.g., individual designator, grade, subspecialty code) and information about the job (e.g., job title, time in job, and number of personnel supervised). These data were used to conduct comparative analysis on the information obtained in the survey.

Analysis was directed at the sample of officers with at least 3 months job experience. Using the survey question "Time Served in Current Job", respondents with less than 3 months in their current job were deleted from the sample resulting in 6083 respondents (n) available for analysis. Table 1 presents the distribution of these respondents by rank.

**Table 1**

Respondents with at Least 3 Months Current Job Experience:
Distribution by Rank

| Rank | $n$ | Percentage |
|------|------|------------|
| CAPT (O-6) | 392 | 6.4 |
| CDR  (O-5) | 718 | 11.8 |
| LCDR (O-4) | 1297 | 21.3 |
| LT   (O-3) | 2101 | 34.5 |
| LTJG (O-2) | 549 | 9.0 |
| ENS  (O-1) | 296 | 4.9 |
| CWO4 (W-4) | 223 | 3.7 |
| CWO3 (W-3) | 217 | 3.6 |
| CWO2 (W-2) | 290 | 4.8 |
| Total | 6083 | 100.0 |

## IV.  Findings

Findings are presented for the study questions listed in section I.  Appendix B provides a listing of findings for each of the 35 designator communities.  Additionally, highlights from individual designator communities or grad~s are discussed in this report.

### Who is Using ADP Resources?

Answering the question "Who is using ADP resources?", was accomplished by examining the responses to types of computer systems.  Respondents were provided a list of seven types of computers:  Microcomputers, Technical workstations, Minicomputers, Mainframes, Supercomputers, Integrated real-time systems, and Technical-tactical systems.
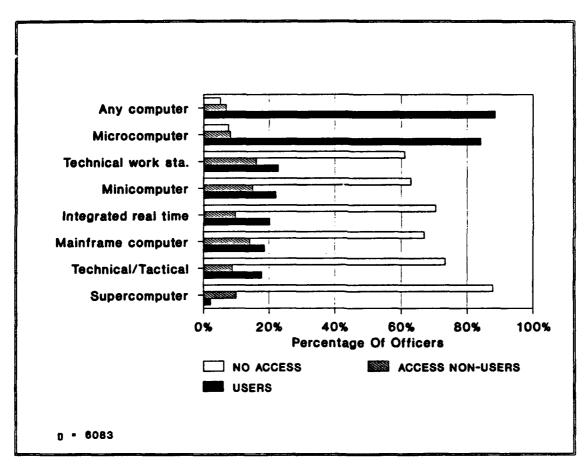
Respondents were asked "Thinking about YOUR JOB AS A WHOLE (not just the computer-related portion), how frequently do you use the following types of computers?" The following scale was provided for respondents to answer the question for each type of computer:

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0 - Not Applicable (not available)
1 - Never (i.e., available but do not use)
2 - Almost Never
3 - Occasionally
4 - Routinely
5 - Frequently
6 - Almost Always
7 - Always
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The respondents were divided into groups based on their involvement with each type of computer.  A NO ACCESS group was comprised of respondents who answered Not Applicable (not available) (0).  ACCESS NON-USERS were obtained from respondents who answered Never (i.e., available but do not use) (1).  USERS were obtained from the respondents who answered Almost Never (2) to Always (7).  Additionally, respondents who used at least one type of computer system were grouped into a category of ANYUSER (any computer user).  Figure 1 illustrates the distribution of these groups for all officers for each type of computer.

Figure 1 presents a series of multiple bar graphs which report that 88% of the responding officers used at least one type of computer in their jobs. Approximately 7% had access to a computer but did not use a computer in their jobs. Inspection of the ACCESS NON-USER data revealed that 10% of officers had access to supercomputers but did not use them. Between 14% and 16% of the officers had access to technical workstations, minicomputers, and mainframe computers but did not use them.



**Figure 1.** Percentage of Officers Who Used Different Types of Computers

## Are These Resources Being Used Directly or Indirectly?

The indirect users of computers were determined by examining the responses to the question "How many people under your supervision use ANY TYPE OF COMPUTER in their job?" Respondents were asked to record the number of officers, enlisted, and civilian personnel supervised. These responses were compared with the ANYUSER group to create four categories of direct and indirect users:

- **Used Only:** an officer who used a computer but did not supervise personnel who used a computer (direct user)

- **Used and Supervised:** a direct computer user and an officer who also supervised personnel who used computers (direct and indirect user)

- **Supervised Only:** an officer who only supervised personnel who used computers (indirect user)

- **Not Involved:** an officer who did not directly use a computer or supervise personnel who used a computer.

Table 2 displays the distribution of officers for the direct and indirect users. The majority of officers, 72.2%, used computers and supervised personnel who used computers. Approximately 8% were indirect users who "supervised only".

**Table 2**

Direct and Indirect Use of Computers by Officers

| Category | Percentage | $n$ |
|---|---|---|
| Used and Supervised | 72.2 | 4371 |
| Used only | 15.7 | 952 |
| Supervised only | 7.6 | 462 |
| Not involved | 4.4 | 267 |
| Total | 99.9 | 6052 |

Note. Percentages do not total 100 due to rounding

error.

Figure 2 displays the distribution of the direct and indirect users by grade. When examining the direct and indirect users of computers by grade, a greater percentage of captains (O-6) were indirect users who supervised personnel who used computers. As was expected, the junior officers (ensigns (O-1) and lieutenants junior grade (O-2)) were more involved with computers by using computers and supervising personnel who used computers.

**Total and Individual Grades**

**Percentage Of Officers**

■ Use only     ■ Use and supervise
☐ Supervise only     ☐ Not Involved

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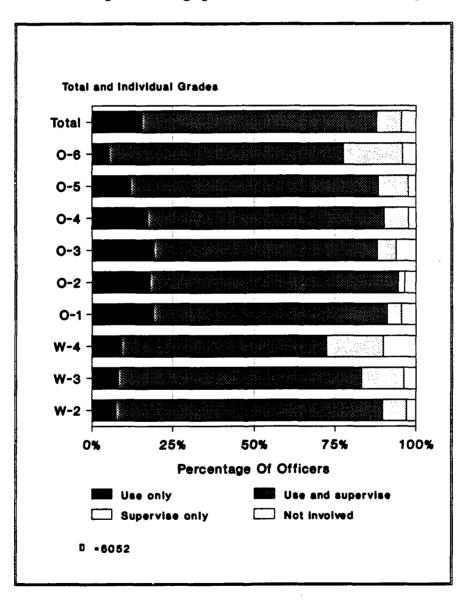
**Figure 2. Direct and Indirect Use of Computers**

## What is the Relative Time Spent in ADP Efforts?

Respondents were asked "On average, what PERCENTAGE of your work day involves computers, whether directly or indirectly?". Only the respondents who had some involvement with computers (i.e., used at least one type of computer or supervised at least one person who used a computer) were included in the analysis of this question. This resulted in an n of 5630. These respondents were sorted into two time groups: a) spending less than 50% of their day involved with computers and b) spending greater than 50% of their day involved with computers.

Two thirds of the officers (69%) spent less than 50% of their day involved with computers. On average, they spent approximately 31% of their working day involved with computers. The community with the highest average percentage of their work day involved with computers was the Oceanography community, 51%.

By rank, the percentage of work day involving computers ranged from a high of 40% for the ensigns, to a low of 21% for the captains. This indicates that as rank increases, time spent using a computer decreases (see Table 3).

**Table 3**

Average Percentage of Work Day Involving Computers by
Rank

| Rank | Percentage of Work Day | n |
|------|------------------------|---|
| CAPT (O-6) | 21 | 362 |
| CDR  (O-5) | 29 | 676 |
| LCDR (O-4) | 30 | 1216 |
| LT   (O-3) | 33 | 1922 |
| LTJG (O-2) | 30 | 512 |
| ENS  (O-1) | 40 | 270 |
| CWO4 (W-4) | 28 | 198 |
| CWO3 (W-3) | 34 | 200 |
| CWO2 (W-2) | 34 | 274 |
| Total | 31[a] | 5630 |

[a]
Total percentage represents the average percentage
of the work day for all respondents.

Throughout the remainder of the report, analysis is based on the officers who used at least one type of computer, n = 5323 of n = 6052 respondents. Analyzed this way, the data are more representative of the officers' true involvement with computers than if officers who did not use computers were included.

## What Types of Hardware are Being Used?

In Table 4 the level of use for each type of computer was determined by summing the responses, Almost Never (2) to Always (7) for each type of computer hardware and dividing by the number of those respondents. These data represent the average frequency of use for each type of computer by officers who were direct users of the computer.

When the responses to frequency of use for each type of computer were examined, the microcomputer was the type of hardware used by the majority (84.2%), who used them Frequently (5.0). Supercomputers had the least number of users (2.2%) and the lowest frequency of use: Occasionally (3.2). Table 4 also displays the percentages of computer users who operated each type of computer and the average response as to how often they used the computer.

**Table 4**

<u>Current Hardware Usage:  Average Response by Officers Who</u>

<u>Used Computers</u>

| Hardware | Average Response (scale) | | % Response ($n$ = 5323) |
|---|---|---|---|
| Microcomputers | Frequently | (5.0) | 84.2 |
| Technical/tactical systems | Routinely | (4.4) | 17.8 |
| Integrated real-time systems | Routinely | (4.3) | 20.1 |
| Mainframes | Routinely | (4.0) | 18.7 |
| Minicomputers | Routinely | (3.8) | 22.1 |
| Technical work-stations | Routinely | (3.7) | 22.8 |
| Supercomputers | Occasionally | (3.2) | 2.2 |

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+------------------------------------------------+
|                RESPONSE SCALE                  |
| 2-Almost Never          5-Frequently           |
| 3-Occasionally          6-Almost Always         |
| 4-Routinely             7-Always               |
+------------------------------------------------+
```

## What Types of Software are Being Used?

The survey provided a list of eight programming languages, three language processors, as well as 28 software and 13 word processing packages. Respondents were asked to indicate how frequently they used each brand, relative to their entire job. Respondents were given the opportunity to mark "Other" for each section to indicate that they used a programming language, processor, software package, or word processing package that was not listed. The scale used was:

      0 - Not Applicable (not available)
      1 - Never (i.e., available but do not use)
      2 - Almost Never
      3 - Occasionally
      4 - Routinely
      5 - Frequently
      6 - Almost Always
      7 - Always

For each programming language, language processor, software package, and word processing package, computer users were divided into three categories relative to their responses to the above scale. A NO ACCESS group was comprised of computer users who answered Not applicable (not available) (0). An ACCESS NON-USERS group answered Never (i.e., available but do not use) (1). The USERS group are the computer users who answered between (2) and (7). The level of use for each type of programming language, language processor, software package, and word processing package was determined by summing the responses, Almost Never (2) to Always (7) for each type of computer hardware and dividing by the number of those respondents. See Table 5, 6 and 7 in the following sections for individual findings.

### Programming Languages and Language Processors.

Table 5 displays the percentages of computer users for each programming language and language processor. Each programming language had less than 10% USERS, with the exception of BASIC which had over 30%. However, these respondents had an average frequency of use of 3.7 to 4.4 for each brand of programming language. This indicated that these computer users were employing programming languages Routinely in their jobs. Eight percent of the respondents were using language compilers. ADA has become the Department of Defense (DOD) standard as a high-order programming language. Table 5 shows that 2% of computer users were employing ADA and 9.5% had access but did not use it.

**Table 5**

Percentage of Computer Users of Each Programming Language

and Language Processor

| Software | Computer Users ($\underline{n}$=5323) | | |
| --- | --- | --- | --- |
| | Users | Access Non-Users | No Access |
| | Programming Languages | | |
| ADA | 2.1 | 9.5 | 82.4 |
| BASIC | 31.6 | 18.2 | 45.5 |
| C | 4.6 | 10.8 | 78.6 |
| COBOL | 3.4 | 11.3 | 79.0 |
| FORTRAN | 5.9 | 11.7 | 76.1 |
| LISP | 0.8 | 8.4 | 84.3 |
| PASCAL | 3.6 | 10.4 | 79.7 |
| SQL | 2.1 | 8.8 | 82.6 |
| Other Programming Languages | 3.3 | 5.8 | 76.8 |
| | Language Processors | | |
| Assembler | 5.0 | 10.4 | 76.8 |
| Compiler | 8.0 | 10.3 | 74.1 |
| Interpreter | 4.5 | 10.0 | 77.5 |

Note. Percentages do not total 100 due to invalid or

missing data.

### Software Packages.

The 28 software packages were divided into eight sections: graphics, spreadsheets, interface, statistics, database, communications, utilities packages, and canned Navy applications. Word processing packages are discussed in a separate section. With the exception of the statistics packages, all were being used on average Frequently (5) or Routinely (4). Table 6 displays the percentages of computer users who employed various types of software. The top three types of software used were graphics, database management, and spreadsheets packages.

**Table 6**

Percentage of Computer Users of Each Software Package

| Software Type | Computer Users ($n$=5323) | | |
|---|---|---|---|
| | Users | Access Non-Users | No Access |
| Graphics (3) | 54.5 | 9.6 | 30.2 |
| Database (5) | 53.8 | 10.6 | 28.5 |
| Spreadsheets (2) | 44.9 | 12.2 | 34.9 |
| Utilities (2) | 34.9 | 7.9 | 47.2 |
| Navy Applications (1) | 22.1 | 6.4 | 63.4 |
| Interface (2) | 19.5 | 11.9 | 57.7 |
| Communications (4) | 19.3 | 7.7 | 61.1 |
| Statistics (2) | 2.0 | 3.7 | 80.9 |

Note. Percentages do not total 100 due to invalid or missing data.

Note. The number in parentheses indicates the number of packages in each software category.

More than two thirds of computer users had at least one graphics package available. Higher grades (O-4, O-5, O-6) had a higher percentage of graphic package users than did lower grades. Aerospace Engineering Duty Officers had a higher percentage of graphics package users (70%) than any other community. *Harvard Graphics* (31.7%) was chosen more often than *Enable Graphics* (16.1%).

*Lotus 1-2-3* was the most popular spreadsheet package, selected by 1706 out of 2389 (71%) of the spreadsheet users. *Lotus 1-2-3* was used by a greater percentage of the Supply and Civil Engineering Corps communities than by any other community (73.3% and 84.8% respectively).

Nearly two thirds of computer users did not have interface packages available. Among users, far more officers indicated *Windows* (931) than indicated *DesqView* (75).

More than 80% of computer users did not have a statistical package available. Only 2% actually used a statistical package, with *SAS* and *SPSS* receiving relatively the same number of responses (50 and 53 respectively). Both packages had the same frequency of use: Occasionally (3).

Two thirds of computer users had a database management package available and over half of all computer users used a database management package. The communities with the highest percentage responding to use of database management packages were Supply (65%), Civil Engineering Corps (67%) and Medical Service Corps (70%). Among database management systems, *dBase* was the package with the greatest percentage of users (47%).

Two thirds of computer users did not have a communication package available. *PROCOMM* received the highest number of users (632). *BITCOM* received the fewest responses (49). While usage of graphics and spreadsheet features of *Enable* was high (857 and 867 respectively), the *Enable* communication package only received 287 responses.

Almost 50% of computer users had utility programs available. Both utility programs received similar responses. *PC Tools* is used by 1316 respondents and *Norton Utilities* was indicated by 1210 respondents. Occasionally (3) was the most often chosen response for both types of utility software, with the average response being Routinely (4) for these utility packages.

The general program, *canned Navy applications* referred to programs such as those specifically developed and used for tracking qualifications or conducting inventory in the Navy. This program received 1179 responses. The most often chosen response was 3 which means it was Occasionally used, and the average response was 4.4 which indicated Routine use. Of those who responded to canned Navy applications, the greatest percentage of any community came from the Supply Corps (35%).

## Word Processing Software Packages.

Respondents were provided with a list of 13 word processing packages and were asked to rate each package according to how frequently they used it in their current jobs. The response scale ranged from Never (i.e., available, but do not use) (1) to Always (7). A Not Applicable (0) column was provided for those who did not have a given package available to them. In addition to the 13 word processing packages listed, respondents could rate "Other" if they had a package which was not listed. The average frequency of use was calculated using only those respondents who marked a value from Almost Never to Always (2 to 7).

When the responses were totaled, 93% of computer users employed a word processing package. Three percent (184) did not have a word processing package available. Table 7 summarizes the percentages of computer users who employed word processing packages.

Ten of the 13 word processing packages were used by less than 20% of the officers. The word processing packages chosen by the majority of respondents were *WordPerfect* (3162), *WordStar* (2042), and *Enable* (1148). *WordPerfect* and *WordStar* were used on average Frequently. The remaining word processing packages were used on average Routinely.

**Table 7**

Percentage of Computer Users of Each Word Processing
Package

|  | Computer Users ($\underline{n}$ = 5323) | | |
|---|---|---|---|
| Word Processing Package | Users | Access Non-Users | No Access |
| WordPerfect | 53.5 | 13.3 | 30.9 |
| WordStar | 34.5 | 14.4 | 48.1 |
| Enable | 19.4 | 18.1 | 59.2 |
| Machine Specific | 8.7 | 9.2 | 78.7 |
| Word | 6.8 | 8.2 | 81.5 |
| Multimate | 6.5 | 9.4 | 80.8 |
| Other | 5.8 | 4.3 | 74.8 |
| MacWrite | 4.8 | 8.3 | 83.4 |
| Appleworks | 3.7 | 7.4 | 85.6 |
| Office Writer | 3.6 | 7.4 | 85.4 |
| Peachtext | 3.4 | 8.9 | 84.2 |
| PFS: Write | 2.8 | 7.4 | 86.1 |
| Display Write | 1.9 | 7.8 | 86.9 |
| Sprint | .5 | 6.7 | 89.1 |

Note. Percentages do not total 100 due to invalid or
missing data.

Figure 3 identifies usage choices reported by officers who had two of the top three word processing packages available. The majority of officers who had two packages available used both regardless of the combination. When officers had two packages available, but used one exclusively, *WordPerfect* appeared to be the package of choice most frequently. It was chosen approximately twice as often as *WordStar* (20% compared to 10%) and approximately five times as often as *Enable* (35% compared to 7%).
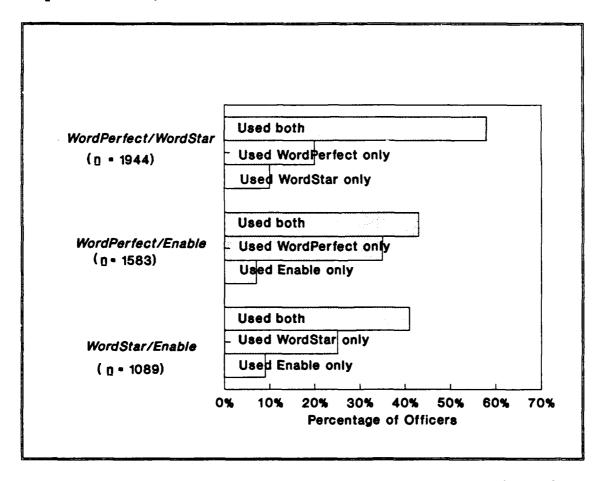


**Figure 3.** Percentage of Officers Who Used 2 of 3 Available Top Word Processing Packages

Officers were also asked to rate how satisfied or dissatisfied they were with each of the word processing packages on a scale from <u>Completely Dissatisfied</u> (1) to <u>Completely Satisfied</u> (7). Table 8 displays the average response by officers who indicated that they used each word processing package. *WordPerfect* users had the highest average response of <u>Somewhat Satisfied</u>. *Enable* had the lowest average response of any of the top three word processing packages, <u>Neither Satisfied Nor Dissatisfied</u>.

**Table 8**

Satisfaction With Word Processing Packages:  Average

Response by Officers Who Used Computers

| Word Processing Package | Average Response (scale) | % Response ($n$ = 5323) |
|---|---|---|
| WordPerfect | Somewhat Satisfied (5.8) | 53.4 |
| Word | Slightly Satisfied (5.5) | 6.8 |
| Other | Slightly Satisfied (5.5) | 5.8 |
| MacWrite | Slightly Satisfied (5.3) | 4.8 |
| Appleworks | Slightly Satisfied (5.3) | 3.7 |
| WordStar | Slightly Satisfied (5.0) | 34.5 |
| Office Writer | Slightly Satisfied (4.9) | 3.6 |
| PFS: Write | Slightly Satisfied (4.9) | 2.8 |
| Multimate | Slightly Satisfied (4.6) | 6.5 |
| Enable | Neither (4.4) | 19.4 |
| Sprint | Neither (4.2) | .5 |
| Machine Specific | Neither (4.3) | 8.7 |
| Display Write | Neither (4.1) | 1.9 |
| Peachtext | Neither (3.5) | 3.4 |

```
                      RESPONSE SCALE
     1-Completely Dissatisfied    5-Slightly Satisfied
     2-Somewhat Dissatisfied      6-Somewhat Satisfied
     3-Slightly Dissatisfied      7-Completely Satisfied
     4-Neither Satisfied Nor Dissatisfied
```

## To What End are These Resources Being Applied?

Respondents were provided with a list of 65 functional fields. These fields were grouped into four functional areas:

Administrative/Management/Logistics Support
Warfare Mission
Strategic/Tactical/Operational Support
Other

Respondents were asked to mark all the fields applicable to them in their use of computers. Appendix C lists the four functional areas and 65 functional fields. The following were the most frequently chosen functional fields:

Manpower, Personnel, and Training 2250 (42%)
Information Resource Management   1420 (27%)
Plans and Policies                1389 (26%)
Budgeting                         1383 (26%)
Supply                            1036 (19%)

The Manpower, Personnel, and Training field was chosen the most often by respondents. Even though the respondents were allowed to choose more than one functional field, 1066 (20%) selected only one field and 448 (8%) didn't select any field. The average number of functional fields chosen was five. Sixty-one percent of all fields chosen were in the administrative area.

The Submarine and Aviation (Pilot) communities chose similar numbers of functional fields across the administrative, warfare, and strategic areas. The Special Warfare and Aviation (Naval Flight Officer) communities chose more fields from the warfare mission area; whereas, the Cryptology, Intelligence, and Oceanography communities chose more fields from the strategic area. The remaining communities chose the majority of functional fields from the administrative area.

All of the functional fields except Fire Control incorporated microcomputer usage. Fire Control employed the technical/tactical system. Table 9 displays the percentages of officers that chose at least one functional field within a functional area.

**Table 9**

**Percentage of Computer Users Who Chose at Least One**

**Functional Field Within a Functional Area**

| Functional Area | Percentage (n=5323) |
|---|---|
| Administrative/ Management/ Logistics Support | 83 |
| Strategic/Tactical/Operational | 28 |
| Warfare Mission Areas | 29 |
| Other | 10 |

**Summary of Findings**

Eighty-eight per  nt of officers used some type of computer in their jobs. Five percent of officers did not have access to any t/pe  f computer. Seven percent of the officers had access to some type of computer but did not use them. The majority of officers used computers and supervised personnel who used computers. On average, officers spent approximately 30% of their day either directly or indirectly involved with computers.

The microcomputer was used frequently by the majority of officers (84.2%) to perform their work in all the functional fields except Fire Control, which was performed using a technical/tactical system. Approximately 20% of officers were using technical workstations, minicomputers, and mainframe computers while, between 14% and 16% had access but did not use these systems.

All software packages were being used at least routinely except for the statistical packages. The top four types of software packages used were word processing, graphics, spreadsheets, and data base management. At least two thirds of computer users had these available and at least half of computer users were using the top brand in each software type frequently or routinely.

Ten of the 13 word processing packages were used by less than 20% of the officers. *WordPerfect* and *WordStar* were chosen by more computer users than any other type of word processing software. When officers had two of the top three packages (*WordPerfect*, *WordStar*, and *Enable*) available, most used both. Where only one was used, *WordPerfect* and *WordStar* both were chosen much more than *Enable*. *WordPerfect* was also chosen more than *WordStar*, though the margin was less than in any choice which included *Enable*.

*Harvard Graphics* and *Desktop Publishing* were selected by more computer users than the *Enable Graphics* package. *Lotus 1-2-3* was the top brand of the spreadsheet packages. *dBase* was chosen by more respondents than any other data base management package and on average was used routinely. Two thirds of computer users did not have communication or interface packages available.

Manpower, Personnel, and Training was the functional field in which most officers were involved when they used computers. Other fields with relatively large numbers of officers involved were Information Resource Management Plans and Policies, Budgeting, Supply, Maintenance, and Accounting.

## V. Discussion and Recommendations

### Discussion

As written in the memo by Admiral Tobin to the officers chosen to complete the OCU Survey, "Computer utilization at all levels within the Navy continues to grow exponentially." Eighty-eight percent of the officers represented in the survey used at least one type of computer system; at least 20% of all officers were involved with sophisticated computer systems beyond the level of the microcomputer. If not already a given, computer literacy beyond the level of word processing as well as knowledge of computer applications, will become a required entry level skill for all officers. These skills will be necessary for officers to perform their jobs and optimize their productivity in the current environment of downsizing the military.

At least two thirds of computer users had word processing, spreadsheet, database, and graphics packages available. Half of these users also chose the top brand in each software category and 20% of the officers used communications packages. This implies that the packages chosen meet the perceived needs of the users. It also suggests that a *de facto* standardization process is taking place. This standardization, if officially adopted, might contribute to increased productivity by decreasing retraining requirements and increasing system compatibility between commands.

The number of ACCESS NON-USERS in the various categories could be interpreted as being related to lack of training in the application of the hardware or software. However, the officer may not need the particular hardware or software application to perform his/her job, yet the command may require it to complete their mission. This finding may also relate to decisions regarding allocation of hardware and software assets. In a constrained resource environment, optimizing deployment of resources to ensure tools are available where needed rather than placed where not required, becomes essential.

The finding that only 20% of the officers used communication packages is noteworthy. As the Navy relies on electronic bulletin boards and automated systems to replace TAD conferences as a means of communications between levels and echelons of command, these software packages may increase in need and application.

## Recommendations

♦ Evaluate the requirement for establishing computer literacy as an entry level skill for officers.

♦ Standardize software packages for major functional requirements.

♦ Conduct ongoing evaluation of computer asset allocation to optimize constrained resources.

♦ Evaluate the future requirements for communication software.

# NAVY OCCUPATIONAL TASK ANALYSIS PROGRAM
## OCCUPATIONAL TASK INVENTORY

# OFFICER COMPUTER UTILIZATION

# NAVY OCCUPATIONAL DEVELOPMENT AND ANALYSIS CENTER (NODAC)

## NAVAL MILITARY PERSONNEL COMMAND DETACHMENT WASHINGTON, D.C. 20374-1501

**JULY 1990**

## INTRODUCTION

The Navy Occupational Task Analysis Program (NOTAP) provides occupational data to Navy Manpower, Personnel and Training (MPT) decision-makers. We store this data in the occupational data bank. We make it available to MPT personnel for: occupational studies of the officer communities, updating the officer manpower and personnel classifications manual, revising training manuals and school curricula.

We randomly select the participants in NOTAP surveys, using the names for mailing purposes only. We welcome your comments on the survey; they will be treated confidentially. Please enter your comments on the last page.

Although this is a survey and not a test, thoughtful and accurate answers are needed.

If you have any questions about how to complete this survey, please contact us at the numbers listed in the box below.

Thank you for your assistance.

*E L Naro*

E. L. NARO
CAPTAIN, U.S. NAVY
Officer in Charge

| COMMANDS ADMINISTERING THIS SURVEY ARE REQUESTED TO RETURN THE COMPLETED SURVEY BOOK WITHIN 10 DAYS OF ITS RECEIPT TO: | IMPORTANT: MARK RETURN ENVELOPE "FIRST CLASS MAIL" |
|---|---|
| Naval Military Personnel Command Detachment<br>Navy Occupational Development and Analysis Center<br>Building 150, Washington Navy Yard (Anacostia)<br>Washington, D.C. 20374-1501 | NODAC Contact Numbers:<br>AUTOVON 288-4622,<br>commercial (202) 433-4622<br>or FAX 433-4898. |

■○■■○○○○○■■○○○○○○○○○○○○○○    **1549**
DO NOT MARK IN THIS AREA

**DEPARTMENT OF THE NAVY**
OFFICE OF THE CHIEF OF NAVAL OPERATIONS
WASHINGTON, DC 20350-2000

From: Chief of Naval Operations (OP-941)
To:   All Naval Officers Completing the Officer Computer
      Utilization Survey

Subj: OFFICER COMPUTER UTILIZATION SURVEY

1.  Computer utilization at all levels within the Navy continues
to grow exponentially.  Computers are becoming more central to
mission accomplishment with each passing day, yet the planning
and management of resources has been decentralized.  The key to
successful management of our increasing reliance on computers is
the availability of accurate data reflecting occupational
requirements for information resources management personnel.

2.  The Navy Occupational Development and Analysis Center
(NODAC), in conjunction with the Staff of the Director, Naval
Communications/Information Systems, developed a survey in an
effort to identify naval officers' involvement with all types of
computers.  This involvement ranges from word processing on a
desktop personal computer to such sophisticated systems as
weapons engineering, medical diagnosis, and computer-aided
software engineering.

3.  This survey is a major step toward achieving intelligent
management of the Navy's computer-related resources.  The time
you invest in completing this survey will have a direct and
enduring effect on the officer billet and personnel
classification structure, as well as on training and education
programs.  Please consider each question carefully and respond
accurately.

P. E. TOBIN
Rear Admiral, U.S. Navy
Director, Naval Communications/
 Information Systems

# IMPORTANT MARKING INSTRUCTIONS

## NUMBERS

Write the numbers in the boxes at the top of the block, making sure that the number is always placed as far to the right as possible. Place a ZERO in any blank box(es) preceding the number. Fill in the corresponding circles below. For example to mark the number 32, mark as follows:

## LETTERS

To mark the AQD Code of ABE:

---

## TO BE COMPLETED BY THE COMMAND

Enter the name of the member completing sections B through G
NAME (Last, First, Middle Initial)

ACTIVITY NAME

---

# SECTION A: BILLET INFORMATION

Complete this section on the **BILLET** the officer is **FILLING**. For billet information, refer to your command's Manpower Authorization Documents (OPNAV 1000/2) or the Officer Distribution Control Report (ODCR) located in your Personnel or Administrative Office.

| ITEM | OPNAV 1000/2 BLOCK LOCATION | DESCRIPTION |
|---|---|---|
| 1. ACTIVITY CODE | #3 | Ten digit number. (Also can be found on the mailing label) |
| 2. BILLET POSITION SEQUENCE CODE | #18 | Five digit number. |
| 3. BILLET DESIGNATOR (DES) | #22 | Four digit number. |
| 4. BILLET GRADE (GR) | #22 | Single letter after designator. |
| 5. BILLET PRIMARY NOBC (PNOBC) | #23 | Four digit number. All billets have PNOBCS. |
| 6. BILLET PRIMARY SUBSPECIALTY (PSSP) | #24 | Four digit number followed by a letter. If two are listed, use the top code. If the billet has none, leave blank. |
| 7. BILLET PRIMARY AQD (PAQ) | #25 | Three character code. If the billet has none, leave blank. |

**7 BILLET PRIMARY AQD**

| SHIP OR STATION ACTIVITY CODE (SEE FRONT COVER LABEL) | 2 BILLET SEQUENCE CODE | 3 BILLET DESIGNATOR | 4 BILLET GRADE | 5 BILLET PRIMARY NOBC | 6 BILLET PRIMARY SUBSPECIALTY CODE |
|---|---|---|---|---|---|

Billet Grade options:
- 0-1 ⓛ
- 0-2 ⓚ
- 0-3 ⓙ
- 0-4 ⓘ
- 0-5 ⓗ
- 0-6 ⓖ
- 0-7 ⓕ
- 0-8 ⓓ
- W-2 ⓞ
- W-3 ⓝ
- W-4 ⓜ

## PLEASE PASS THIS SURVEY TO THE OFFICER WHO WILL BE COMPLETING IT, STARTING WITH SECTION B.
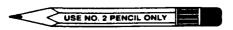
# IMPORTANT MARKING INSTRUCTIONS

USE NO. 2 PENCIL ONLY

INCORRECT MARKS: ⊗ ⊘ ⦸ ⦶
CORRECT MARK: ○ ● ○ ○

- Make black marks that completely fill the circle.
- Erase cleanly and completely any changes you make.
- Do not make stray marks in this booklet.

1. Print the required information in each row of boxes provided.
2. Blacken the corresponding circle under the number or letter you printed.
3. Make sure the number is always placed as far right as possible.

### MARKING EXAMPLES

To mark the number 32

To mark the AQD CODE BCA

## TO BE COMPLETED BY THE OFFICER BEING SURVEYED

## SECTION B: PERSONAL AND JOB BACKGROUND INFORMATION

Please ensure that your name and activity name are entered on PAGE 4. Review the important marking instructions at the top of the page before completing this survey booklet.

### SEX
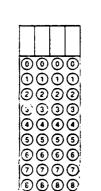
. MALE ①
FEMALE ②

### SOCIAL SECURITY NUMBER

### DESIGNATOR

Enter your designator.

EXAMPLE: If you are an NFO in the Naval Reserve, your designator is 1325.

### GRADE

Indicate your CURRENT grade. Enter frocked grade, if applicable.

| | |
|---|---|
| 0-1 | ⓛ |
| 0-2 | ⓚ |
| 0-3 | ⓙ |
| 0-4 | ⓘ |
| 0-5 | ⓗ |
| 0-6 | ⓖ |
| W-2 | ⓒ |
| W-3 | ⓝ |
| W-4 | ⓜ |

### SUBSPECIALTY CODE

SUBSPECIALTY (SSP) CODES are five characters consisting of four numerals and an alphabetic suffix. Subspecialty codes are assigned to officers as a result of subspecialty selection board action and identify postgraduate education or experience training. Enter your FIRST subspecialty code. If you are uncertain of your actual SSP, consult your Manpower or Personnel Office. This information can be found on your ODCR and Officer Data Card.

EXAMPLE: If you are a Naval Flight Officer (NFO) with a proven subspecialty in anti-submarine warfare, you would enter "4044R" as your SSP. If you have no subspecialty, LEAVE BLANK.

### SIGNIFICANCE OF SUBSPECIALTY

Indicate the significance of the knowledge and experience you have obtained in your SSP as it relates to your CURRENT JOB. If you have no subspecialty, LEAVE BLANK.

| | |
|---|---|
| INSIGNIFICANT | ① |
| SLIGHTLY SIGNIFICANT | ② |
| SOMEWHAT SIGNIFICANT | ③ |
| MODERATELY SIGNIFICANT | ④ |
| QUITE SIGNIFICANT | ⑤ |
| HIGHLY SIGNIFICANT | ⑥ |
| EXTREMELY SIGNIFICANT | ⑦ |

Do you feel that the billet you are in should be coded for a computer subspecialty (XX9X), regardless of whether or not it is currently coded?

| | |
|---|---|
| DON'T KNOW | ⓪ |
| NO | ① |
| YES | ② |

If you have a computer-related subspecialty code (XX9X), have you ever been assigned to a billet coded for this subspecialty?

| | |
|---|---|
| NOT APPLICABLE. DO NOT HAVE AN XX9X SUBSPECIALTY (SKIP TO PAGE 6) | ⓪ |
| NO (SKIP TO PAGE 6) | ① |
| YES, CURRENTLY | ② |
| YES, PREVIOUSLY | ③ |
| YES, BOTH CURRENTLY AND PREVIOUSLY | ④ |

How much time elapsed between assignment of your XX9X subspecialty code and assignment to an XX9X billet?

(e.g., if you completed a three-year tour in an uncoded billet after receiving your XX9X subspecialty code and were then assigned to an XX9X billet, enter "03" for 3 years and "00" for 0 months.)

| YRS | MOS |
|---|---|

### SOURCE OF COMMISSION

Fill in the circle which indicates the source of your most recent commission.

| | |
|---|---|
| AVIATION OFFICER CANDIDATE SCHOOL (AOCS) | ① |
| AVIATION RESERVE OFFICER CANDIDATE (AVROC) | ② |
| DIRECT APPOINTMENT: STAFF CORPS | ③ |
| DIRECT APPOINTMENT: OTHER | ④ |
| LIMITED DUTY OFFICER (LDO) | ⑤ |
| MERCHANT MARINE OFFICER CANDIDATE | ⑥ |
| NAVAL ACADEMY | ⑦ |
| NAVAL AVIATION CADET (NAVCAD) | ⑧ |
| NAVAL RESERVE OFFICER TRAINING CORPS (NROTC) – CONTRACT | ⑨ |
| NAVAL RESERVE OFFICER TRAINING CORPS (NROTC) – REGULAR | ⑩ |
| NAVY ENLISTED NURSING EDUCATION PROGRAM (NENEP) | ⑪ |
| NAVY ENLISTED SCIENTIFIC EDUCATION PROGRAM (NESEP) | ⑫ |
| OFFICER CANDIDATE HOSPITALMAN (OCHN) | ⑬ |
| OFFICER CANDIDATE SCHOOL (OCS) | ⑭ |
| OTHER SERVICE ACADEMY | ⑮ |
| OTHER SERVICE COMMISSIONING PROGRAM OR SOURCE | ⑯ |
| RESERVE OFFICER CANDIDATE (ROC) | ⑰ |
| WARRANT OFFICER | ⑱ |
| WOMEN OFFICER OFFICER CANDIDATE SCHOOL (WOS OR WOCS) | ⑲ |
| OTHER NAVAL COMMISSIONING PROGRAM OR SOURCE | ⑳ |

### COMMISSIONED SERVICE

Indicate your total commissioned service.

EXAMPLE: If your total commissioned service is 7 years, 1 month, enter "07" for 7 years and "01" for 1 month.

| YRS | | MOS | |
|---|---|---|---|
| ⓪ | ⓪ | ⓪ | ⓪ |
| ① | ① | ① | ① |
| ② | ② | | ② |
| ③ | ③ | | ③ |
| ④ | ④ | | ④ |
| | ⑤ | | ⑤ |
| | ⑥ | | ⑥ |
| | ⑦ | | ⑦ |
| | ⑧ | | ⑧ |
| | ⑨ | | ⑨ |

### TIME SERVED IN CURRENT GRADE

Include time in a frocked status.

EXAMPLE: If you were frocked for 6 months and have actually been promoted to LT for 2 years, 7 months, enter "03" and "01" to indicate 3 years and 1 month.

| YRS | | MOS | |
|---|---|---|---|
| ⓪ | ⓪ | ⓪ | ⓪ |
| ① | ① | ① | ① |
| ② | ② | | ② |
| | ③ | | ③ |
| | ④ | | ④ |
| | ⑤ | | ⑤ |
| | ⑥ | | ⑥ |
| | ⑦ | | ⑦ |
| | ⑧ | | ⑧ |
| | ⑨ | | ⑨ |

### FORMAL EDUCATION AND MAJOR FIELDS OF STUDY

Indicate the highest level of formal education you have COMPLETED.

| | |
|---|---|
| HIGH SCHOOL DIPLOMA OR EQUIVALENT | ① |
| SOME COLLEGE. BUT LESS THAN A TWO-YEAR DEGREE | ② |
| ASSOCIATE DEGREE. OR BETWEEN 2 AND 4 YEARS | ③ |
| BACHELOR'S DEGREE | ④ |
| MASTER'S DEGREE | ⑤ |
| POST-MASTER'S DEGREE | ⑥ |
| DOCTORAL DEGREE | ⑦ |
| POST-DOCTORAL DEGREE | ⑧ |

### SERVICE COLLEGE(S) OR SERVICE COLLEGE EQUIVALENTS ATTENDED

Indicate the level of the service colleges or equivalent programs you have completed. For the purpose of this survey, service college refers to those institutions such as the Naval War College, other service war colleges. staff colleges, etc. (Do not include the Naval Postgraduate School or Naval Academy in your response.) If you have completed both junior and senior service colleges, enter both responses. If you have completed neither, LEAVE BLANK.

| | |
|---|---|
| JUNIOR OR INTERMEDIATE | ① |
| SENIOR | ② |

Indicate your PRIMARY field of study for the degrees you have received. See page 7 for major fields of study.

EXAMPLE: If you have a bachelor's degree in Finance and a master's in Operations Analysis, you would enter "006" in the undergraduate block, "127" in the master's block and "000" in the post-master's and beyond block. If you do not have the degree, enter "000" in the block.

| UNDER-GRADUATE | | | MASTER'S | | | POST-MASTER'S OR BEYOND | | |
|---|---|---|---|---|---|---|---|---|
| ⓪ | ⓪ | ⓪ | ⓪ | ⓪ | ⓪ | ⓪ | ⓪ | ⓪ |
| ① | ① | ① | ① | ① | ① | ① | ① | ① |
| ② | ② | ② | ② | ② | ② | ② | ② | ② |
| ③ | ③ | ③ | ③ | ③ | ③ | ③ | ③ | ③ |
| ④ | ④ | ④ | ④ | ④ | ④ | ④ | ④ | ④ |
| ⑤ | ⑤ | ⑤ | ⑤ | ⑤ | ⑤ | ⑤ | ⑤ | ⑤ |
| ⑥ | ⑥ | ⑥ | ⑥ | ⑥ | ⑥ | ⑥ | ⑥ | ⑥ |
| ⑦ | ⑦ | ⑦ | ⑦ | ⑦ | ⑦ | ⑦ | ⑦ | ⑦ |
| ⑧ | ⑧ | ⑧ | ⑧ | ⑧ | ⑧ | ⑧ | ⑧ | ⑧ |
| ⑨ | ⑨ | ⑨ | ⑨ | ⑨ | ⑨ | ⑨ | ⑨ | ⑨ |

# MAJOR FIELDS OF STUDY

## BUSINESS AND MANAGEMENT

| | |
|---|---|
| 001 | ACCOUNTING |
| 002 | BUSINESS ADMINISTRATION |
| 003 | BUSINESS EDUCATION |
| 004 | COMPUTER SCIENCE |
| 005 | ECONOMICS |
| 006 | FINANCE |
| 007 | MANAGEMENT |
| 008 | MANAGEMENT, ACQUISITION AND CONTRACT |
| 009 | MANAGEMENT, COMPUTER SYSTEMS |
| 010 | MANAGEMENT, FINANCIAL |
| 011 | MANAGEMENT, HUMAN RESOURCES |
| 012 | MANAGEMENT, INDUSTRIAL |
| 013 | MANAGEMENT, INFORMATION SYSTEMS |
| 014 | MANAGEMENT, MANPOWER, PERSONNEL & TRAINING |
| 015 | MANAGEMENT, MATERIAL LOGISTICS SUPPORT |
| 016 | MANAGEMENT, PERSONNEL |
| 017 | MANAGEMENT, PETROLEUM |
| 018 | MANAGEMENT, SUPPLY ACQUISITION/DISTRIBUTION |
| 019 | MANAGEMENT, SYSTEMS INVENTORY |
| 020 | MANAGEMENT, TELECOMMUNICATIONS SYSTEMS |
| 021 | MANAGEMENT, TRANSPORTATION LOGISTICS |
| 022 | MARKETING |
| 023 | ORGANIZATIONAL EFFECTIVENESS |
| 024 | PUBLIC ADMINISTRATION |
| 025 | REAL ESTATE INSURANCE |
| 026 | RETAILING |
| 027 | OTHER BUSINESS FIELD |

## COMMUNICATIONS AND LANGUAGE

| | |
|---|---|
| 028 | ENGLISH |
| 029 | COMMUNICATIONS |
| 030 | FOREIGN LANGUAGE |
| 031 | JOURNALISM |
| 032 | LITERATURE |
| 033 | PUBLIC AFFAIRS |
| 034 | OTHER COMMUNICATIONS LANGUAGE FIELD |

## EDUCATION

| | |
|---|---|
| 035 | ADULT |
| 036 | EARLY CHILDHOOD |
| 037 | EDUCATION AND TRAINING MANAGEMENT |
| 038 | ELEMENTARY |
| 039 | HEALTH PHYSICAL |
| 040 | INDUSTRIAL |
| 041 | SECONDARY |
| 042 | SPECIAL |
| 043 | OTHER EDUCATION FIELD |

## FINE AND PERFORMING ARTS

| | |
|---|---|
| 044 | ART |
| 045 | ART EDUCATION |
| 046 | ART HISTORY |
| 047 | DANCE |
| 048 | FILM PHOTOGRAPHY |
| 049 | MUSIC |
| 050 | MUSIC EDUCATION |
| 051 | RADIO TELEVISION |
| 052 | STUDIO ART |
| 053 | THEATER DRAMATICS |
| 054 | OTHER ARTS FIELD |

## HEALTH CARE, SCIENCE AND ADMINISTRATION

| | |
|---|---|
| 055 | DENTISTRY |
| 056 | ENVIRONMENTAL HEALTH |
| 057 | HEALTH ADMINISTRATION |
| 058 | HOSPITAL ADMINISTRATION |
| 059 | MEDICINE |
| 060 | NURSING |
| 061 | OCCUPATIONAL THERAPY |
| 062 | PHARMACY |
| 063 | PHYSICAL THERAPY |
| 064 | SPEECH THERAPY |
| 065 | OTHER HEALTH ADMINISTRATION FIELD |
| 066 | OTHER HEALTH CARE FIELD |
| 067 | OTHER HEALTH SCIENCE FIELD |

## HISTORY AND AREA STUDIES

| | |
|---|---|
| 068 | AMERICAN |
| 069 | ASIAN |
| 070 | BLACK AFRO-AMERICAN |
| 071 | LATIN AMERICAN |
| 072 | RUSSIAN |
| 073 | URBAN |
| 074 | OTHER HISTORY FIELD |
| 075 | OTHER AREA STUDIES |

## MATHEMATICS AND SCIENCE

| | |
|---|---|
| 076 | ANTISUBMARINE WARFARE SYSTEMS TECHNOLOGY |
| 077 | ARCHITECTURE |
| 078 | ARCHITECTURE, NAVAL |
| 079 | ASTRONOMY |
| 080 | BIOLOGY |
| 081 | BOTANY |
| 082 | CHEMISTRY |
| 083 | ENGINEERING |
| 084 | ENGINEERING, AERONAUTICAL |
| 085 | ENGINEERING, AEROSPACE |
| 086 | ENGINEERING, BIOMEDICAL |
| 164 | ENGINEERING, CIVIL |
| 087 | ENGINEERING, COMMUNICATIONS |
| 088 | ENGINEERING, ELECTRICAL |
| 089 | ENGINEERING, ELECTRONIC WARFARE |
| 090 | ENGINEERING, FACILITIES |
| 091 | ENGINEERING, INDUSTRIAL |
| 092 | ENGINEERING, MARINE |
| 093 | ENGINEERING, MECHANICAL |
| 094 | ENGINEERING, NAVAL |
| 095 | ENGINEERING, NUCLEAR |
| 096 | ENGINEERING, OCEAN |
| 097 | ENGINEERING, PETROLEUM |
| 098 | ENGINEERING, SPACE SYSTEMS |
| 099 | ENGINEERING, SYSTEMS |
| 100 | ENGINEERING, WEAPONS SYSTEMS |
| 101 | ENGINEERING ACOUSTICS |
| 102 | ENGINEERING MANAGEMENT |
| 103 | MATHEMATICS |
| 104 | MATHEMATICS, APPLIED |
| 105 | METEOROLOGY |
| 106 | METEOROLOGY & OCEANOGRAPHY |
| 107 | OCEANOGRAPHY |
| 108 | PHYSICS |
| 109 | PHYSICS, NUCLEAR |
| 110 | SCIENCE, APPLIED |
| 111 | SCIENCE, EARTH |
| 112 | SCIENCE, ENGINEERING |
| 113 | SCIENCE, ENVIRONMENTAL OR ECOLOGY |
| 114 | SCIENCE, GENERAL |
| 115 | SCIENCE, HYDROGRAPHIC |
| 116 | SCIENCES, NATURAL |
| 117 | SCIENCES, PHYSICAL |
| 118 | STATISTICS |
| 119 | SYSTEMS TECHNOLOGY |
| 120 | UNDERWATER ACOUSTICS |
| 121 | ZOOLOGY |
| 122 | OTHER MATHEMATICS FIELD |
| 123 | OTHER SCIENCE FIELD |

## OPERATIONS

| | |
|---|---|
| 124 | COMMAND, CONTROL & COMMUNICATIONS |
| 125 | INTELLIGENCE |
| 126 | OPERATIONAL LOGISTICS |
| 127 | OPERATIONS ANALYSIS |
| 128 | OPERATIONS RESEARCH |
| 129 | SPACE SYSTEMS OPERATIONS |
| 130 | OTHER OPERATIONS FIELD |

## PHILOSOPHY AND HUMANITIES

| | |
|---|---|
| 131 | CLASSICS |
| 132 | HUMANITIES |
| 133 | PHILOSOPHY |
| 134 | RELIGION OR THEOLOGY |
| 135 | OTHER PHILOSOPHY/HUMANITIES FIELD |

## SOCIAL AND BEHAVIORAL SCIENCE

| | |
|---|---|
| 136 | ANTHROPOLOGY |
| 137 | CRIMINAL JUSTICE |
| 138 | GEOGRAPHY |
| 139 | GOVERNMENT |
| 140 | NATIONAL SECURITY AFFAIRS |
| 141 | POLITICAL SCIENCE |
| 142 | PSYCHOLOGY |
| 143 | PSYCHOLOGY, INDUSTRIAL |
| 144 | SOCIAL SCIENCE |
| 145 | SOCIAL WORK |
| 146 | SOCIOLOGY |
| 147 | OTHER BEHAVIORAL SCIENCE FIELD |
| 148 | OTHER SOCIAL SCIENCE FIELD |

## OTHER PROFESSIONAL FIELDS

| | | | | |
|---|---|---|---|---|
| 149 | AGRICULTURE | 157 | LAW, LABOR |
| 150 | FORESTRY | 158 | LAW, OCEAN |
| 151 | HOME ECONOMICS | 159 | LAW, TAX |
| 152 | LAW | 160 | LIBRARY SCIENCE |
| 153 | LAW, CRIMINAL | 161 | MINISTRY OR DIVINITY |
| 154 | LAW, ENVIRONMENTAL | 162 | VETERINARY |
| 155 | LAW, FORENSIC SCIENCE | 163 | OTHER |
| 156 | LAW, INTERNATIONAL | | |

## PRIMARY JOB TITLE

Select the job title from the list on pages 9 to 13 that BEST describes your primary job. Enter the job title number in the block below. If you have an additional job of equal importance, complete both the primary and secondary block. If a block does not apply, enter "000." DO NOT INCLUDE COLLATERAL DUTIES.

| PRIMARY | SECONDARY |
|---|---|
|  |  |
| ⓪⓪⓪ | ⓪⓪⓪ |
| ①①① | ①①① |
| ②②② | ②②② |
| ③③③ | ③③③ |
| ④④④ | ④④④ |
| ⑤⑤⑤ | ⑤⑤⑤ |
| ⑥⑥⑥ | ⑥⑥⑥ |
| ⑦⑦ | ⑦⑦ |
| ⑧⑧ | ⑧⑧ |
| ⑨⑨ | ⑨⑨ |

## TIME SERVED IN CURRENT JOB

Fill in the circle which corresponds to the amount of time you have been in your CURRENT JOB at your present command.

EXAMPLE: If you have been in your CURRENT JOB for 1 year and 10 months fill in the circle marked "1 year but less than 4 years."

LESS THAN 3 MONTHS                                ①

3 MONTHS BUT LESS THAN 6 MONTHS     ②

6 MONTHS BUT LESS THAN 12 MONTHS   ③

1 YEAR BUT LESS THAN 4 YEARS             ④

4 YEARS OR MORE                                     ⑤

## INDEX OF JOB TITLES

Below is a breakdown of job titles by subcategory and number to assist you in locating your title(s) from the list on pages 9 to 13. The list is not all inclusive, but does contain the major types of jobs found in the Navy.

| | |
|---|---|
| AVIATION | 001-055 |
| EDUCATION AND TRAINING | 056-073 |
| ENGINEERING AND MAINTENANCE | 074-208 |
| HEALTH CARE SERVICES | 209-292 |
| MANAGEMENT, EXECUTIVE AND ADMINISTRATIVE SERVICES (INCLUDES CO, XO, AND OIC) | 293-307 |
| NAVAL OPERATIONS | |
| ADP | 308-319 |
| COMMUNICATIONS | 320-338 |
| CRYPTOLOGY | 339-349 |
| ENGINEERING OPERATIONS | 350-354 |
| INTELLIGENCE | 355-368 |
| NAVAL OPERATIONS | 369-384 |
| PHOTOGRAPHY | 385-389 |
| SHORE OPERATIONS | 390-408 |
| SPECIAL OPERATIONS | 409-410 |
| STAFF AND FLEET COMMAND | 411-445 |
| PERSONNEL | 446-473 |
| PHYSICAL AND NATURAL SCIENCES | 474-503 |
| SUPPLY AND FISCAL | 504-549 |
| SUPPORT SERVICES | 550-587 |
| SURFACE AND SUBSURFACE | 588-655 |

# JOB TITLES

## AVIATION

### FLIGHT

| | |
|---|---|
| 001 | AIRBORNE ANTISUBMARINE WARFARE (ASW) SENSOR OFFICER |
| 002 | AIRBORNE ASW TACTICAL COORDINATOR |
| 003 | AIRBORNE COMMUNICATIONS OFFICER |
| 004 | AIRBORNE EARLY WARNING PILOT |
| 005 | AIRBORNE MULTISENSOR OCEAN RECONNAISSANCE COORDINATOR |
| 006 | AIRBORNE RADAR INTERCEPT OFFICER |
| 007 | AIRBORNE TACTICAL DATA SYSTEM–COMBAT INFORMATION CENTER (CIC) OFFICER |
| 008 | ANTISUBMARINE PILOT |
| 009 | ATTACK PILOT |
| 010 | AVIATION DETACHMENT OFFICER IN CHARGE |
| 011 | BOMBARDIER NAVIGATOR |
| 012 | CARRIER AIRBORNE CIC OFFICER |
| 013 | ELECTRONIC COUNTERMEASURES (ECM) PILOT |
| 014 | FIGHTER PILOT |
| 015 | FLIGHT INSTRUCTOR |
| 016 | HELICOPTER ANTISUBMARINE PILOT |
| 017 | HELICOPTER PILOT |
| 018 | INSTRUMENT FLIGHT INSTRUCTOR – PILOT |
| 019 | NAVAL FLIGHT OFFICER INSTRUCTOR |
| 020 | NAVIGATOR, AERIAL |
| 021 | NAVIGATOR ECM OFFICER |
| 022 | PATROL PLANE COMMANDER |
| 023 | PHOTOGRAPHIC PILOT |
| 024 | SPECIAL PROJECT AIRBORNE ELECTRONICS EVALUATOR |
| 025 | SPECIAL PROJECT PILOT |
| 026 | TEST PILOT |
| 027 | TRANSPORT PLANE COMMANDER |
| 028 | UTILITY PILOT |

### GENERAL AVIATION

| | |
|---|---|
| 029 | AIRCRAFT MATERIAL CONTROL AND ALLOCATION OFFICER |
| 030 | AVIATION TACTICAL READINESS OFFICER |
| 031 | NAVY AIRSPACE OFFICER |
| 032 | STAFF AIR TACTICAL OFFICER |
| 033 | STAFF AVIATION SAFETY OFFICER |
| 034 | TARGET AIRCRAFT CONTROLLER |

### GROUND OPERATIONS

| | |
|---|---|
| 035 | AERIAL MINING OFFICER |
| 036 | AIR TRAFFIC CONTROL OFFICER |
| 037 | AIRCRAFT FUELING OFFICER |
| 039 | CONTROLLED APPROACH OFFICER |
| 040 | ELECTRONIC WARFARE OFFICER, AVIATION |
| 041 | GUIDED MISSILE TEST OFFICER, AIR-LAUNCHED |
| 042 | LANDING SIGNAL OFFICER |
| 043 | NATOPS OFFICER |
| 044 | OPERATIONS LOG OFFICER |
| 038 | SAFETY OFFICER |
| 045 | SQUADRON COMMUNICATIONS OFFICER |
| 046 | SQUADRON FLIGHT OFFICER |
| 047 | SQUADRON NAVIGATION OFFICER |
| 048 | SQUADRON OPERATIONS OFFICER |
| 049 | SQUADRON SCHEDULES OFFICER |
| 050 | SQUADRON SPECIAL MISSIONS OFFICER |
| 051 | SQUADRON WEAPONS TRAINING OFFICER |
| 052 | STAFF AIR DEFENSE OFFICER |
| 053 | STAFF AIR OPERATIONS AND PLANNING OFFICER |
| 054 | STRIKE OPERATIONS OFFICER |
| 055 | SURVIVAL OFFICER |

## EDUCATION AND TRAINING

| | |
|---|---|
| 056 | EDUCATION TRAINING PLANNING AND PROGRAM OFFICER |
| 057 | EDUCATIONAL FACILITIES OFFICER |
| 058 | EDUCATIONAL SERVICES OFFICER |
| 059 | GROUND SCHOOL INSTRUCTOR |
| 060 | INDOCTRINATION TRAINING OFFICER |
| 061 | INSTRUCTOR, ACADEMIC |
| 062 | INSTRUCTOR, GENERAL |
| 063 | INSTRUCTOR, NAVAL SCIENCE |
| 064 | INSTRUCTOR, TECHNICAL |
| 065 | INSTRUCTOR TRAINING OFFICER |
| 066 | OFFICER CANDIDATE COMPANY OFFICER |
| 067 | PHYSICAL TRAINING OFFICER |
| 068 | PROFESSOR OF NAVAL SCIENCE |
| 069 | SCHOOL ADMINISTRATOR |
| 070 | STUDENT |
| 071 | TRAINING AIDS OFFICER |
| 072 | TRAINING OFFICER |
| 073 | TRAINING PUBLICATIONS AND CURRICULUM OFFICER |

## ENGINEERING AND MAINTENANCE

### AVIATION

| | |
|---|---|
| 074 | AERODYNAMICS ENGINEERING OFFICER |
| 075 | AERONAUTICAL ENGINEERING OFFICER, AIRCRAFT MECHANICAL AND SAFETY EQUIPMENT |
| 076 | AERONAUTICAL PROPULSION SYSTEMS ENGINEER |
| 077 | AIR WING MAINTENANCE OFFICER |
| 078 | AIRCRAFT ARMAMENT DEVELOPMENT OFFICER |
| 079 | AIRCRAFT ELECTRICAL EQUIPMENT INSTALLATION DESIGN AND DEVELOPMENT OFFICER |
| 080 | AIRCRAFT/GUIDED MISSILE ENGINE PROJECT OFFICER |
| 081 | AIRCRAFT INTERMEDIATE MAINTENANCE MATERIAL CONTROL OFFICER |
| 082 | AIRCRAFT INTERMEDIATE MAINTENANCE OFFICER |
| 083 | AIRCRAFT MAINTENANCE QUALITY CONTROL OFFICER |
| 084 | AIRCRAFT ORGANIZATIONAL MAINTENANCE/MATERIAL CONTROL OFFICER |
| 085 | AIRCRAFT ORGANIZATIONAL MAINTENANCE OFFICER |
| 086 | AIRCRAFT PRODUCTION OFFICER |
| 087 | AIRCRAFT STRUCTURES ENGINEERING OFFICER |
| 088 | AIRCRAFT TEST ENGINEER |
| 089 | AVIATION MAINTENANCE ENGINEERING OFFICER |
| 090 | AVIATION MAINTENANCE FIELD REPRESENTATIVE |
| 091 | AVIATION MAINTENANCE MANAGEMENT ENGINEER |
| 092 | AVIATION MAINTENANCE PLANNING OFFICER |
| 093 | AVIATION OVERHAUL SCHEDULES OFFICER |
| 094 | CATAPULT AND ARRESTING GEAR PLANNING SUPERINTENDENT |
| 095 | DEPOT MAINTENANCE ENGINEERING AND QUALITY OFFICER |
| 096 | DEPOT MAINTENANCE FLIGHT TEST OFFICER |
| 097 | DEPOT MAINTENANCE PRODUCTION OFFICER |
| 098 | GROUND SUPPORT EQUIPMENT AND SHIP FACILITIES ARRANGEMENT OFFICER |
| 099 | LAUNCHING RECOVERY AND LANDING AIDS ENGINEERING OFFICER |
| 100 | TYPE AIRCRAFT DESIGN AND DEVELOPMENT OFFICER |

### ELECTRONICS

| | |
|---|---|
| 101 | AIRCRAFT ELECTRONICS DIRECTOR |
| 102 | ELECTRONIC ENGINEERING PLANS AND POLICIES DIRECTOR |
| 103 | ELECTRONIC EQUIPMENT INSTALLATION, MAINTENANCE AND REPAIR OFFICER |
| 104 | ELECTRONIC EQUIPMENT MILITARY CHARACTERISTICS OFFICER |
| 105 | ELECTRONIC EQUIPMENT RESEARCH OFFICER |
| 106 | ELECTRONIC INSPECTION AND SURVEY OFFICER |
| 107 | ELECTRONICS ENGINEERING OFFICER |
| 108 | ELECTRONICS INSTALLATION AND MAINTENANCE PLANNING OFFICER |
| 109 | ELECTRONICS LOGISTICS OFFICER |
| 110 | ELECTRONICS PLANNING, INSTALLATION, AND REPAIR SUPERINTENDENT |
| 111 | ELECTRONICS RESEARCH ADMINISTRATOR |
| 112 | SPACE REQUIREMENTS ANALYST |
| 113 | STAFF ELECTRONIC MATERIAL OFFICER |
| 114 | TRAINING DEVICE PROGRAM COORDINATOR |
| 115 | TRAINING DEVICES ADMINISTRATOR |
| 116 | TRAINING ELECTRONIC DEVICES UTILIZATION OFFICER |

### FACILITIES

| | |
|---|---|
| 117 | FACILITIES CONSTRUCTION/FACILITIES SERVICES OFFICER |
| 118 | FACILITIES DESIGN OFFICER |
| 119 | FACILITIES ENGINEERING OFFICER |
| 120 | FACILITIES PLANNING AND PROGRAMMING OFFICER |
| 121 | FACILITIES RESEARCH OFFICER |
| 122 | NUCLEAR SHORE POWER SYSTEMS ENGINEERING OR CONSTRUCTION OFFICER |
| 123 | NUCLEAR SHORE SYSTEM OFFICER |
| 124 | PETROLEUM PRODUCTION ENGINEERING OFFICER |
| 125 | PUBLIC WORKS MAINTENANCE OFFICER |
| 126 | PUBLIC WORKS OFFICER |
| 127 | PUBLIC WORKS OPERATIONS OFFICER |
| 128 | PUBLIC WORKS PLANNING OFFICER |
| 129 | PUBLIC WORKS TRANSPORTATION OFFICER |
| 130 | PUBLIC WORKS UTILITIES OFFICER |
| 131 | STAFF CIVIL ENGINEER |

### NAVAL ENGINEERING

| | |
|---|---|
| 132 | COMBAT SYSTEMS SUPERINTENDENT |
| 133 | DIVING AND SALVAGE EQUIPMENT ENGINEERING OFFICER |
| 134 | ENGINEERING LIAISON OFFICER |
| 135 | ENGINEERING MATERIAL PLANNING AND PROCUREMENT OFFICER |
| 136 | FUELS AND LUBRICANTS TECHNICAL OFFICER |
| 137 | HULL INSPECTION OFFICER |
| 138 | HULL SUPERINTENDENT |
| 139 | INDUSTRIAL ENGINEER |
| 140 | MACHINERY INSPECTION OFFICER |
| 141 | MACHINERY INSTALLATION AND REPAIR SUPERINTENDENT |

## ENGINEERING AND MAINTENANCE (cont.)

142 NAVAL ENGINEERING HULL DEVELOPMENT OFFICER
143 NAVAL ENGINEERING INSPECTION OFFICER
144 NAVAL ENGINEERING LOGISTICS OFFICER
145 NAVAL ENGINEERING MACHINERY DEVELOPMENT OFFICER
146 NAVAL ENGINEERING OFFICER, SHIP DESIGN
147 NAVAL ENGINEERING RESEARCH PROJECT OFFICER
148 NAVAL ENGINEERING TRIALS AND SURVEY OFFICER
149 NUCLEAR POWER RESEARCH PROJECT OFFICER
150 NUCLEAR POWER SUPERINTENDENT
151 NUCLEAR SYSTEMS AND COMPONENTS REPAIR OFFICER
152 PRODUCTION ENGINEERING OFFICER
153 QUALITY ASSURANCE SUPERINTENDENT
154 SHIP ACTIVATION INACTIVATION OFFICER
155 SHIP CONSTRUCTION AND REPAIR SUPERINTENDENT
156 SHIP PROJECT OFFICER
157 SHIP TYPE ENGINEERING OFFICER
158 SHIP TYPE PLANNING AND ESTIMATING SUPERINTENDENT
159 SHOP PRODUCTION OFFICER
160 SHOP SUPERINTENDENT
161 STAFF HULL MATERIAL OFFICER
162 STAFF MACHINERY MATERIAL OFFICER
163 SUPERVISOR OF SHIPBUILDING, CONVERSION AND REPAIR
164 YARD PLANNING OFFICER
165 YARD PRODUCTION OFFICER

### WEAPONS

166 AMMUNITION MATERIAL OFFICER
167 ARMAMENT PROOF OFFICER
168 DEGAUSSING OFFICER
169 FIRE CONTROL INSPECTION AND REPAIR OFFICER
170 GUIDED MISSILE SYSTEMS RESEARCH AND
      DEVELOPMENT OFFICER
171 GUIDED MISSILE TEST OFFICER
172 GUIDED MISSILE TYPE PROJECT OFFICER
173 METROLOGY OFFICER
174 MINE ASSEMBLY AND REPAIR OFFICER
175 NAVAL PLANT REPRESENTATIVE
176 NAVAL WEAPONS TECHNICAL LIAISON OFFICER
177 NUCLEAR WEAPONS RESEARCH AND DEVELOPMENT OFFICER
178 OPTICAL REPAIR OFFICER
179 PROGRAM MANAGER. WEAPONS SYSTEMS
180 STAFF WEAPONS MATERIAL OFFICER
181 SURFACE MUNITIONS PROJECT OFFICER
182 TECHNICAL ASSISTANT FOR WEAPONS
183 *TORPEDO TEST OFFICER*
184 TORPEDO WEAPONS OFFICER
185 UNDERSEA WEAPONS PROJECT OFFICER
186 WEAPONS AND AMMUNITION INSPECTION SAFETY OFFICER
187 WEAPONS AND AMMUNITION PRODUCTION OFFICER
188 WEAPONS CONTROL SYSTEMS PROJECT OFFICER
189 WEAPONS DESIGN OFFICER
190 WEAPONS DISTRIBUTION OFFICER
191 WEAPONS EQUIPMENT PROJECT OFFICER
192 WEAPONS INSTALLATION AND REPAIR SUPERINTENDENT
193 WEAPONS INSTALLATION OFFICER
194 WEAPONS LOGISTICS OFFICER
195 WEAPONS MAINTENANCE OFFICER
196 WEAPONS MATERIAL OFFICER
197 WEAPONS MILITARY CHARACTERISTICS OFFICER
198 WEAPONS OFFICER NAVAL ACTIVITY
199 WEAPONS PLANNING AND PROGRESS OFFICER
200 WEAPONS PLANS AND POLICIES DIRECTOR
201 WEAPONS PROCUREMENT OFFICER
202 WEAPONS PRODUCTION PLANNING OFFICER
203 WEAPONS REPAIR OFFICER
204 WEAPONS RESEARCH PLANNING OFFICER
205 WEAPONS SAFETY OFFICER
206 WEAPONS SYSTEMS INSPECTION AND SURVEY OFFICER
207 WEAPONS TECHNICAL INFORMATION OFFICER
208 WEAPONS TECHNICAL OFFICER

## HEALTH CARE SERVICES

### HEALTH CARE SERVICES

209 ADMINISTRATIVE OFFICER. DENTAL SERVICE
210 AEROSPACE EXPERIMENTAL PSYCHOLOGIST
211 AEROSPACE PHYSIOLOGIST
212 AUDIOLOGIST
213 BIOCHEMIST
214 CLINICAL PSYCHOLOGIST
215 DIETITIAN
216 ENTOMOLOGIST
217 ENVIRONMENTAL HEALTH OFFICER
218 FOOD SERVICE OFFICER. MEDICAL FACILITY

### HEALTH CARE SERVICES (continued)

219 HEALTH CARE ADMINISTRATOR
220 INDUSTRIAL HYGIENE OFFICER
221 MEDICAL FACILITIES LIAISON OFFICER
222 MEDICAL TECHNOLOGIST
223 MICROBIOLOGIST
224 OCCUPATIONAL THERAPIST
225 OPERATIONS MANAGEMENT OFFICER, MEDICAL FACILITY
226 OPTOMETRIST
227 PATIENT ADMINISTRATOR
228 PHARMACIST
229 PHYSICAL THERAPIST
230 PHYSIOLOGIST
231 PODIATRIST
232 RADIATION HEALTH OFFICER
233 RADIATION SPECIALIST
234 RESEARCH PSYCHOLOGIST
235 SOCIAL WORKER

### HEALTH SERVICES MANAGEMENT

236 CHAIRMAN OF DEPARTMENT, TEACHING PROGRAM
237 COMMANDING OFFICER. FLEET MARINE FORCE COMPANY
238 DIRECTOR. HEALTH SERVICE OR PROGRAM.
239 HEALTH SCIENCE RESEARCH OFFICER
240 HEALTH SERVICES BRANCH CLINIC DIRECTOR
241 HEALTH SERVICES DEPARTMENT HEAD
242 HEALTH SERVICES QUALITY ASSURANCE COORDINATOR
243 MEDICAL DEPARTMENT STAFF OFFICER

### MEDICAL SPECIALTIES (MEDICINE)

244 ANESTHESIOLOGIST
245 DERMATOLOGIST
246 EMERGENCY MEDICAL SPECIALIST
247 FAMILY PRACTITIONER
248 FLIGHT SURGEON
249 GENERAL PRACTICE MEDICAL OFFICER
250 HEALTH SERVICES RESIDENT
251 INTERN
252 INTERNIST
253 NEUROLOGIST
254 NUCLEAR MEDICINE SPECIALIST
255 PATHOLOGIST
256 PEDIATRICIAN
257 PHYSICIAN'S ASSISTANT
258 PREVENTIVE MEDICINE OFFICER
259 PSYCHIATRIST
260 RADIOLOGIST
261 UNDERSEA MEDICAL OFFICER

### MEDICAL SPECIALTIES (SURGERY)

262 COLON RECTAL SURGEON
263 GENERAL SURGEON
264 NEUROSURGEON
265 OBSTETRICIAN-GYNECOLOGIST
266 OPHTHALMOLOGIST
267 ORTHOPEDIC SURGEON
268 OTOLARYNGOLOGIST
269 PLASTIC SURGEON
270 THORACIC AND CARDIOVASCULAR SURGEON
271 UROLOGIST

### GENERAL DENTISTRY

272 DENTAL OFFICER GENERAL PRACTITIONER
273 OPERATIVE DENTIST

### DENTAL SPECIALTIES

274 COMPREHENSIVE DENTIST
275 ENDODONTIST
276 MAXILLOFACIAL PROSTHETIST
277 ORAL DIAGNOSTICIAN
278 ORAL MAXILLOFACIAL SURGEON
279 ORAL PATHOLOGIST
280 ORTHODONTIST
281 PEDODONTIST
282 PERIODONTIST
283 PROSTHODONTIST
284 PUBLIC HEALTH PREVENTIVE DENTISTRY OFFICER

## HEALTH CARE SERVICES (cont.)

### NURSING

| | |
|---|---|
| 285 | CHARGE NURSE |
| 286 | CLINICAL SPECIALIST, NURSING |
| 287 | NURSE ANESTHETIST |
| 288 | OPERATING ROOM NURSE |
| 289 | OUTPATIENT CARE NURSE |
| 290 | PATIENT CARE COORDINATOR |
| 291 | PRIMARY CARE NURSE PRACTITIONER |
| 292 | STAFF NURSE |

## MANAGEMENT, EXECUTIVE AND ADMINISTRATIVE SERVICES

| | |
|---|---|
| 293 | ADMINISTRATIVE ASSISTANT |
| 294 | ADMINISTRATIVE OFFICER |
| 295 | COMMANDING OFFICER |
| 296 | COMMAND MANAGEMENT DIRECTOR |
| 297 | EXECUTIVE OFFICER |
| 298 | GENERAL SERVICES OFFICER DATA ANALYST |
| 299 | MAINTENANCE AND MATERIAL MANAGEMENT OFFICER |
| 300 | MANAGEMENT ANALYSIS AND CONTROL OFFICER |
| 301 | MANAGEMENT INFORMATION CENTER OFFICER |
| 302 | MANAGEMENT INFORMATION SYSTEMS OFFICER |
| 303 | OFFICER IN CHARGE |
| 304 | POSTAL OFFICER |
| 305 | PRINTING AND PUBLICATIONS OFFICER |
| 306 | RECORDS MANAGEMENT OFFICER |
| 307 | TECHNICAL LIBRARIAN |

## NAVAL OPERATIONS

### AUTOMATIC DATA PROCESSING (ADP)

| | |
|---|---|
| 308 | ADP CUSTOMER LIAISON OFFICER |
| 309 | ADP PLANS OFFICER |
| 310 | ADP PRODUCTION OFFICER |
| 311 | ADP PROGRAMS OFFICER |
| 312 | ADP SYSTEM DIRECTOR |
| 313 | ADP SYSTEMS MAINTENANCE OFFICER |
| 314 | ADP SYSTEMS SECURITY OFFICER |
| 315 | COMPUTER SYSTEMS ANALYST |
| 316 | DATA BASE MANAGEMENT OFFICER |
| 317 | DIGITAL COMPUTER SYSTEM PROGRAMMER |
| 318 | DOCUMENTATION AND PROGRAM CONTROL OFFICER |
| 319 | SHIPBOARD NONTACTICAL ADP SYSTEM COORDINATOR |

### COMMUNICATIONS

| | |
|---|---|
| 320 | ARMED FORCES COURIER SERVICE OFFICER |
| 321 | AUTOMATED MESSAGE PROCESSING EXCHANGE OFFICER |
| 322 | CIRCUIT CONTROL OFFICER |
| 323 | COMMUNICATIONS OFFICER |
| 324 | COMMUNICATIONS SECURITY OFFICER |
| 325 | COMMUNICATIONS WATCH OFFICER |
| 326 | COMMUNICATIONS PLANS AND OPERATIONS OFFICER |
| 327 | COMMUNICATIONS SECURITY MATERIAL ISSUING OFFICER |
| 328 | COMMUNICATIONS TRAFFIC OFFICER |
| 329 | CRYPTOBOARD OFFICER |
| 330 | CRYPTOSECURITY OFFICER |
| 331 | CUSTODIAN OF CMS MATERIAL |
| 332 | DIRECTOR OF COMMUNICATIONS |
| 333 | FREQUENCY PLANS AND ASSIGNMENT OFFICER |
| 334 | NAVAL CONTROL OF SHIPPING COMMUNICATIONS PLANS OFFICER |
| 335 | RADIO STATION OFFICER |
| 336 | SATELLITE COMMUNICATIONS OFFICER |
| 337 | SIGNAL OFFICER |
| 338 | STAFF COMMUNICATIONS OFFICER |

### CRYPTOLOGY

| | |
|---|---|
| 339 | CLASSIC WIZARD OPERATIONS OFFICER |
| 340 | DIRECT SUPPORT COORDINATOR |
| 341 | DIRECT SUPPORT OFFICER |
| 342 | ELECTRONICS INTELLIGENCE TECHNICAL GUIDANCE UNIT OFFICER |
| 343 | HFDF NET CONTROL OFFICER |
| 344 | HFDF ANALYSIS OFFICER |
| 345 | INFORMATION PROCESSING AND REPORTING OFFICER |
| 346 | MANUAL MORSE COLLECTION OFFICER |
| 347 | NON-MORSE COLLECTION OFFICER |
| 348 | OPERATIONS WATCH OFFICER |
| 349 | SPECIAL OPERATIONS OFFICER |

### ENGINEERING OPERATIONS

| | |
|---|---|
| 350 | DEEP SUBMERGENCE VEHICLE OPERATOR |
| 351 | ENGINEERING MAINTENANCE OFFICER |
| 352 | EXAMINER, SURFACE SHIP PROPULSION PLANT |
| 353 | STAFF ENGINEER OFFICER |
| 354 | UNDERWAY REPLENISHMENT EQUIPMENT MAINTENANCE OFFICER |

### INTELLIGENCE

| | |
|---|---|
| 355 | ADP INTELLIGENCE OFFICER |
| 356 | ASW INTELLIGENCE OFFICER |
| 357 | DEFENSE ATTACHE |
| 358 | ELECTRONIC INTELLIGENCE OFFICER |
| 359 | GEOGRAPHIC AREA INTELLIGENCE OFFICER |
| 360 | INTELLIGENCE INVESTIGATIONS OFFICER |
| 361 | INTELLIGENCE OFFICER |
| 362 | INTELLIGENCE SUPPORT OFFICER |
| 363 | MULTISENSOR INTELLIGENCE OFFICER |
| 364 | NAVAL ATTACHE |
| 365 | OPERATIONAL INTELLIGENCE OFFICER |
| 366 | PHOTOGRAPHIC INTELLIGENCE OFFICER |
| 367 | SCIENTIFIC AND TECHNICAL INTELLIGENCE OFFICER |
| 368 | TACTICAL INTELLIGENCE OFFICER |

### NAVAL OPERATIONS

| | |
|---|---|
| 369 | ATOMIC ENERGY PLANS AND POLICIES OFFICER |
| 370 | DEPUTY/VICE COMMANDER |
| 371 | EXAMINER, REACTOR SAFEGUARDS |
| 372 | HEAD OF NAVAL MISSION |
| 373 | INSPECTOR, TECHNICAL |
| 374 | INSPECTOR GENERAL |
| 375 | INTERNATIONAL AFFAIRS OFFICER |
| 376 | JOINT STRATEGIC PLANS AND POLICY OFFICER |
| 377 | MILITARY SEALIFT COMMAND COMMANDER |
| 378 | PLANS AND POLICIES ASSISTANT |
| 379 | PLANS AND POLICIES DEPUTY |
| 380 | PLANS AND POLICIES DIRECTOR |
| 381 | PROGRAM MANAGER |
| 382 | ASSISTANT PROGRAM MANAGER |
| 383 | PROJECT MANAGER |
| 384 | ASSISTANT PROJECT MANAGER |

### PHOTOGRAPHY

| | |
|---|---|
| 385 | FILM CONTROL OFFICER |
| 386 | IMAGE FORMING SYSTEMS MAINTENANCE OFFICER |
| 387 | MOTION PICTURE AND TELEVISION PROJECT OFFICER |
| 388 | PHOTOGRAPHIC MATERIAL OFFICER |
| 389 | PHOTOGRAPHIC OFFICER |

### SHORE OPERATIONS

| | |
|---|---|
| 390 | BEACHMASTER |
| 391 | CIVIL AFFAIRS OFFICER |
| 392 | COASTAL/HARBOR DEFENSE OFFICER |
| 393 | DRYDOCKING OFFICER |
| 394 | FACILITIES MANAGER |
| 395 | FLEET COMPOSITE OPERATIONAL READINESS GROUP OFFICER |
| 396 | INSHORE UNDERSEA WARFARE OFFICER |
| 397 | LANDING CRAFT AIR CUSHION MAINTENANCE OFFICER |
| 398 | MILITARY SEALIFT COMMAND REPRESENTATIVE |
| 399 | MOVEMENT REPORTING OFFICER |
| 400 | NAVAL CONTROL OF SHIPPING OFFICER |
| 401 | OCEAN SYSTEMS OPERATIONS OFFICER |
| 402 | OCEAN SYSTEMS WATCH OFFICER |
| 403 | OPERATIONS CONTROL CENTER BRIEFING OFFICER |
| 404 | PORT SERVICES OFFICER |
| 405 | SEARCH AND RESCUE OFFICER |
| 406 | SHIP PLOT OFFICER |
| 407 | SHIPPING OPERATIONS OFFICER |
| 408 | YARD BOATSWAIN |

### SPECIAL OPERATIONS

| | |
|---|---|
| 409 | EXPLOSIVE ORDNANCE DISPOSAL OFFICER |
| 410 | SEA-AIR-LAND OFFICER |

### STAFF AND FLEET COMMAND

| | |
|---|---|
| 411 | AMPHIBIOUS OPERATIONS OFFICER |
| 412 | ANTI-AIR WARFARE OPERATIONS OFFICER |
| 413 | AREA COMMANDER |
| 414 | ASSISTANT CHIEF OF STAFF |
| 415 | CHIEF OF STAFF |
| 416 | CHIEF STAFF OFFICER |
| 417 | COMMANDER, OPERATING FORCES COMMAND |

## NAVAL OPERATIONS (cont.)

418 DEPARTMENT DIRECTOR
419 DEPUTY DIRECTOR
420 EXECUTIVE ASSISTANT
421 FLAG AIDE
422 FLAG SECRETARY
423 LOGISTICS OFFICER
424 MILITARY ASSISTANCE PROGRAMS OFFICER
425 OPERATIONS ANALYST
378 PLANS AND POLICIES ASSISTANT
379 PLANS AND POLICIES DEPUTY
380 PLANS AND POLICIES DIRECTOR
381 PROGRAM MANAGER
382 ASSISTANT PROGRAM MANAGER
383 PROJECT MANAGER
384 ASSISTANT PROJECT MANAGER
426 SHIPPING CONTROL OFFICER
427 SPECIAL ASSISTANT
428 STAFF ADMINISTRATION OFFICER
429 STAFF ANTISUBMARINE OFFICER
430 STAFF COMBAT INFORMATION CENTER OFFICER
431 STAFF COMMAND AND CONTROL OFFICER
432 STAFF ELECTRONIC WARFARE OFFICER
433 STAFF LIAISON OFFICER
434 STAFF MATERIAL OFFICER
435 STAFF MINE WARFARE OFFICER
436 STAFF NAVAL CONTROL OF SHIPPING OFFICER
437 STAFF NUCLEAR WEAPONS OFFICER
438 STAFF OPERATIONS AND PLANS OFFICER
439 STAFF OPERATIONS COMMAND CENTER WATCH OFFICER
440 STAFF PLANS OFFICER
441 STAFF READINESS OFFICER
442 STAFF SPECIAL PROJECTS OPERATIONS OFFICER
443 STAFF SUBMARINE WARFARE OFFICER
444 STAFF WEAPONS OFFICER
445 STRATEGIC PLANS OFFICER

## PERSONNEL

446 BRIG OFFICER
447 CIVILIAN MANPOWER MANAGEMENT OFFICER
448 COUNSELING AND ASSISTANCE CENTER DIRECTOR
449 DETAILER
450 DISCIPLINE ADMINISTRATION AND REVIEW OFFICER
451 EQUAL OPPORTUNITY/RACE RELATIONS PROGRAM OFFICER
452 HUMAN RESOURCE MANAGEMENT OFFICER
453 INDUCTION AND ENLISTMENT OFFICER
454 INTERNAL RELATIONS/MEDIA OFFICER
455 LEADERSHIP DEVELOPMENT/ENLISTED RETENTION OFFICER
456 MANPOWER PLANNING OFFICER
457 MANPOWER REQUIREMENTS DETERMINATION OFFICER
458 MANPOWER STAFF OFFICER
459 MILITARY MANPOWER REQUIREMENTS CONTROL OFFICER
460 MOBILIZATION AND SELECTION OFFICER
461 PERSONNEL MANPOWER MANAGEMENT OFFICER
462 PERSONNEL CLASSIFICATION OFFICER
463 PERSONNEL EVALUATION AND MEASUREMENTS OFFICER
464 PERSONNEL PERFORMANCE OFFICER
465 PERSONNEL PLANNING OFFICER
466 PERSONNEL PLANS AND POLICY CHIEF
467 PERSONNEL PLANS AND POLICY DIRECTOR
468 PERSONNEL PLANS AND POLICY OFFICER
469 PERSONNEL RESEARCH OFFICER
470 PERSONNEL STAFF OFFICER
471 PROCUREMENT AND RECRUITING OFFICER
472 STAFF PERSONNEL OFFICER
473 TRANSIENT PERSONNEL UNIT OFFICER

## PHYSICAL AND NATURAL SCIENCES

### NAVAL SCIENCE

474 DESIGNATED PROJECT ENGINEERING COORDINATOR
475 DESIGNATED PROJECT INTEGRATED LOGISTICS SYSTEM
        COORDINATOR
476 DESIGNATED PROJECT MANAGER
477 DESIGNATED PROJECT SUPPORT OFFICER
478 DESIGNATED PROJECT SYSTEMS INTEGRATION COORDINATOR
479 DESIGNATED PROJECT TEST AND EVALUATION COORDINATOR
480 LIAISON OFFICER, NAVAL RESEARCH AND DEVELOPMENT
481 MAJOR PROJECT MANAGER
482 MANAGER, DESIGNATED PROJECT FUNCTIONAL ELEMENT
483 NAVAL OBSERVATORY OFFICER
484 NAVAL SCIENCES RESEARCH COORDINATOR/ADMINISTRATOR
485 OPERATIONAL TEST AND EVALUATION OFFICER
486 PREOPERATIONAL TEST AND EVALUATION OFFICER
487 SPACE ACQUISITION OFFICER
488 WARFARE RESEARCH OFFICER

### OCEANOGRAPHY

489 HYDROGRAPHY PROGRAM OFFICER
490 METEOROLOGICAL AND OCEANOGRAPHIC EQUIPMENT
        PROGRAM OFFICER
491 OCEANOGRAPHY SERVICES OFFICER
492 OCEANOGRAPHY WATCH OFFICER
493 STAFF OCEANOGRAPHY OFFICER

### PHYSICAL AND NATURAL SCIENCES

494 CHEMIST
495 MATERIALS ENGINEERING OFFICER
496 MATHEMATICS RESEARCH OFFICER
497 PHYSICAL SCIENCES RESEARCH OFFICER
498 PHYSICIST
499 SPACE PROJECTS TECHNOLOGIST
500 STATISTICAL DATA ANALYST

### SOCIAL SCIENCES

501 BEHAVIORAL SCIENTIST
502 LANGUAGE OFFICER
503 PSYCHOLOGICAL OPERATIONS OFFICER

## SUPPLY AND FISCAL

### FISCAL

504 ACCOUNTING OFFICER
505 ACCOUNTING SYSTEMS OFFICER
506 AUDITING OFFICER
507 BUDGET OFFICER
508 COMPTROLLER
509 DISBURSING ADMINISTRATION AND RECORDS OFFICER
510 DISBURSING OFFICER
511 FISCAL OFFICER

### GENERAL SUPPLY AND FISCAL

512 EQUIPMENT PROGRAM SUPPORT OFFICER
513 FUEL DEPOT OFFICER
514 FUEL LOGISTICS PLANNING OFFICER
515 GENERAL SUPPLY OFFICER
516 NAVY EXCHANGE OFFICER
517 STAFF SUPPLY OFFICER
518 STORES OFFICER
519 SUPPLY FIELD SERVICES OFFICER
520 SUPPLY LOGISTICS OFFICER
521 SUPPLY PLANS OFFICER
522 TECHNICAL SUPPLY OFFICER

### INVENTORY CONTROL

523 INVENTORY CONTROL METHODS OFFICER
524 INVENTORY FINANCE OFFICER
525 STOCK CONTROL OFFICER, REQUIREMENTS

### MATERIAL DISTRIBUTION

526 ISSUE CONTROL OFFICER
527 MATERIAL DIVISION OFFICER
528 MATERIAL HANDLING EQUIPMENT OFFICER
529 MATERIAL IDENTIFICATION OFFICER
530 NAVAL SUPPLY CONTROL OFFICER
531 SUPPLY RECEIVING OFFICER
532 WAREHOUSE AND STORAGE OFFICER

### PROCUREMENT

533 ADMINISTRATIVE CONTRACTING OFFICER
534 PROCUREMENT CONTRACTING OFFICER
535 PROCUREMENT MANAGEMENT OFFICER

### SUBSISTENCE, OPEN MESS AND BACHELOR QUARTERS MANAGEMENT

536 BACHELOR QUARTERS MANAGER
537 COMMISSARY STORE OFFICER
538 FOOD SERVICE ADMINISTRATOR
539 FOOD SERVICE OFFICER
540 MESS TREASURER

## SUPPLY AND FISCAL (cont.)

### TRANSPORTATION

541 AIR TRAFFIC OFFICER
542 CARGO HANDLING OFFICER
543 FREIGHT TRAFFIC MANAGEMENT OFFICER
544 FREIGHT TRANSPORTATION OFFICER
545 HOUSEHOLD GOODS OFFICER
546 PASSENGER TRANSPORTATION OFFICER
547 TRANSPORTATION DIRECTOR
548 TRANSPORTATION LOGISTICS OFFICER
549 TRANSPORTATION SERVICES OFFICER

## SUPPORT SERVICES

### CHAPLAIN

550 CHAPLAIN
551 CLAIMANT CHAPLAIN
552 SUPERVISORY CHAPLAIN

### LEGAL

553 ADMINISTRATIVE LAW ATTORNEY
554 ADMIRALTY ATTORNEY
555 APPELLATE COUNSEL
556 APPELLATE MILITARY JUDGE
557 CLAIMS ATTORNEY
558 COMMERCIAL AND BUSINESS LAW ATTORNEY
559 DEFENSE COUNSEL
560 GENERAL ATTORNEY
561 INTERNATIONAL LAW ATTORNEY
562 LEGAL ADMINISTRATIVE ASSISTANT
563 LEGAL ASSISTANCE ATTORNEY
564 LEGAL OFFICER
565 LEGISLATIVE COUNSEL
566 MILITARY JUDGE
567 MILITARY JUSTICE MANAGEMENT OFFICER
568 PATENT ATTORNEY
569 TRIAL COUNSEL

### PUBLIC AFFAIRS

570 FIELD PRESS CENSORSHIP OFFICER
571 HISTORICAL OFFICER
572 INTRAGOVERNMENTAL INQUIRIES OFFICER
573 PICTORIAL EDITOR
574 PRESS OFFICER
575 PUBLIC AFFAIRS OFFICER
576 RADIO-TELEVISION PROGRAM OFFICER

### SECURITY AND LAW ENFORCEMENT

577 AIRCRAFT CRASH AND SALVAGE OFFICER
578 DISASTER PREPAREDNESS OFFICER
579 FIRE PROTECTION OFFICER
580 NUCLEAR, BIOLOGICAL AND CHEMICAL DEFENSE OFFICER
581 SAFETY ENGINEER
582 SECURITY MANAGER
583 SECURITY OFFICER
584 SHORE PATROL OFFICER

### WELFARE

585 MUSIC DIRECTOR
586 PERSONAL SERVICES AFFAIRS OFFICER
587 SPECIAL SERVICES OFFICER

## SURFACE AND SUBSURFACE

### ADMINISTRATIVE

588 3M DATA ANALYST
589 ENGINEERING LIAISON OFFICER

### COMBAT SYSTEMS OR WEAPONS

590 ADP SYSTEMS MAINTENANCE OFFICER
591 ANTISUBMARINE WEAPONS OFFICER
592 COMBAT SYSTEMS OFFICER
593 FIRE CONTROL OFFICER
594 GUNNERY/ORDNANCE OFFICER
595 MISSILE SYSTEMS OFFICER
596 SPECIAL WEAPONS ASSEMBLY OFFICER
597 SPECIAL WEAPONS UNIT OFFICER
598 WEAPONS DIVISION OFFICER
599 WEAPONS OFFICER

### DECK

600 BOAT GROUP OFFICER
601 DECK DIVISION OFFICER
602 FIRST LIEUTENANT
603 SALVAGE OPERATIONS OFFICER

### ENGINEERING

604 AUXILIARY MACHINERY OFFICER
605 BOILER OFFICER
606 DAMAGE CONTROL ASSISTANT
607 MAIN ENGINE OFFICER
608 MAIN PROPULSION ASSISTANT
609 RADIOLOGICAL CONTROL OFFICER
610 SHIP'S ELECTRICAL OFFICER
611 SHIP'S ENGINEERING OFFICER
612 SHIP'S REACTOR CONTROL ASSISTANT
613 SHIP'S REACTOR MECHANICAL ASSISTANT
614 SHIP'S REACTOR OFFICER

### NAVIGATION

615 SHIP'S NAVIGATOR

### OPERATIONS, COMMUNICATIONS AND AIR TRAFFIC

616 AIR ANTISUBMARINE OFFICER
617 AIR BOATSWAIN
618 AIRCRAFT FUELING OFFICER
619 AIRCRAFT HANDLING OFFICER
620 AIR INTERCEPT CONTROLLER SUPERVISOR
621 AIR OFFICER
622 AIR OPERATIONS OFFICER
623 AIR TRAFFIC CONTROL OFFICER
624 ANTISUBMARINE AIR CONTROLLER
625 ANTISUBMARINE CLASSIFICATION AND ANALYSIS OFFICER
626 CATAPULT AND ARRESTING GEAR OFFICER
627 CIC OFFICER
628 NTDS CIC OFFICER
629 CIC WATCH OFFICER
630 NTDS CIC WATCH OFFICER
631 CMS CUSTODIAN
632 COMMUNICATIONS OFFICER
633 CONTROLLED APPROACH OFFICER
634 DIRECT SUPPORT OFFICER, NAVAL SECURITY GROUP
635 FLIGHT DECK OFFICER
636 HANGAR DECK OFFICER
637 MINESWEEPING OFFICER
638 OCEANOGRAPHY SERVICES OFFICER
639 OPERATIONAL INTELLIGENCE OFFICER
640 OPERATIONS OFFICER
641 PHOTOGRAPHY OFFICER
642 PHOTO INTELLIGENCE OFFICER
643 RADAR AIR TRAFFIC CONTROL CENTER OFFICER
644 RADIO OFFICER

### REPAIR

645 AIRCRAFT INTERMEDIATE MAINTENANCE/MATERIAL CONTROL OFFICER
646 AIRCRAFT INTERMEDIATE MAINTENANCE CONTROL OFFICER
647 DIVING OFFICER
648 ELECTRICAL REPAIR OFFICER
649 ELECTRONIC EQUIPMENT INSTALLATION, MAINTENANCE AND REPAIR
650 MACHINERY INSTALLATION AND REPAIR OFFICER
651 QUALITY ASSURANCE SUPERINTENDENT
652 OPTICAL REPAIR OFFICER
655 REPAIR OFFICER (TENDER)
653 SHIP'S REPAIR OFFICER
654 WEAPONS REPAIR OFFICER

## TOTAL NUMBER OF PERSONNEL

Indicate the total number of personnel who work for you.

EXAMPLE: If you are the CO of a naval activity with 147 personnel assigned to you, you would enter "0147." If you are a Department Head of a naval activity and have 53 people assigned to you, you would enter "0053." If you do not supervise anyone, enter "0000."

| | | | |
|---|---|---|---|
| ⓪ | ⓪ | ⓪ | ⓪ |
| ① | ① | ① | ① |
| ② | ② | ② | ② |
| ③ | ③ | ③ | ③ |
| ④ | ④ | ④ | ④ |
| ⑤ | ⑤ | ⑤ | ⑤ |
| ⑥ | ⑥ | ⑥ | ⑥ |
| ⑦ | ⑦ | ⑦ | ⑦ |
| ⑧ | ⑧ | ⑧ | ⑧ |
| ⑨ | ⑨ | ⑨ | ⑨ |

## NUMBER OF PERSONNEL THAT YOU DIRECTLY SUPERVISE

Indicate the number of personnel in each category who report DIRECTLY to you. Include only those personnel who exist in your chain of command and are identified on your command's organizational chart.

EXAMPLE: If, as a department head, you DIRECTLY supervise 2 officer division heads and 1 civilian division head, you would enter "02" in the officer block, "00" in the enlisted block and "01" in the civilian block. If a block does not apply, enter "00."

### NUMBER OF PEOPLE SUPERVISED

| OFFICER | | ENLISTED | | CIVILIAN | |
|---|---|---|---|---|---|
| | | | | | |
| ⓪ | ⓪ | ⓪ | ⓪ | ⓪ | ⓪ |
| ① | ① | ① | ① | ① | ① |
| ② | ② | ② | ② | ② | ② |
| ③ | ③ | ③ | ③ | ③ | ③ |
| ④ | ④ | ④ | ④ | ④ | ④ |
| ⑤ | ⑤ | ⑤ | ⑤ | ⑤ | ⑤ |
| ⑥ | ⑥ | ⑥ | ⑥ | ⑥ | ⑥ |
| ⑦ | ⑦ | ⑦ | ⑦ | ⑦ | ⑦ |
| ⑧ | ⑧ | ⑧ | ⑧ | ⑧ | ⑧ |
| ⑨ | ⑨ | ⑨ | ⑨ | ⑨ | ⑨ |

## HIGHEST GRADE(S) OF SUBORDINATE(S)

Indicate the highest grade of personnel you DIRECTLY supervise in each category. If you do not supervise anyone in a category leave that block blank.

EXAMPLE: If you are the administrative officer and you have a YNC, YN1, and 3 YNSN who work for you, you would fill in the circle by the E-7 and leave the other blocks blank.

### GRADE OF SENIOR SUBORDINATE

| OFFICER | ENLISTED | CIVILIAN |
|---|---|---|
| O-1 Ⓛ | E-1 ① | GS-9 ① |
| O-2 Ⓚ | E-2 ② | GS-10 ② |
| O-3 Ⓙ | E-3 ③ | GS-11 ③ |
| O-4 Ⓘ | E-4 ④ | GS-12 ④ |
| O-5 Ⓗ | E-5 ⑤ | GS-13 ⑤ |
| O-6 Ⓖ | E-6 ⑥ | GM-13 ⑥ |
| W-2 Ⓞ | E-7 ⑦ | GS-14 ⑦ |
| W-3 Ⓝ | E-8 ⑧ | GM-14 ⑧ |
| W-4 Ⓜ | E-9 ⑨ | GS-15 ⑨ |
| | | GM-15 ⑩ |
| | | SES ⑪ |

## GRADE OF YOUR IMMEDIATE SUPERVISOR

Fill in the circle which indicates the status and grade of your immediate supervisor.

### IMMEDIATE SUPERVISOR

| MILITARY GRADE | CIVILIAN GRADE |
|---|---|
| O-1 Ⓛ | GS-9 ① |
| O-2 Ⓚ | GS-10 ② |
| O-3 Ⓙ | GS-11 ③ |
| O-4 Ⓘ | GS-12 ④ |
| O-5 Ⓗ | GS-13 ⑤ |
| O-6 Ⓖ | GM-13 ⑥ |
| O-7 Ⓕ | GS-14 ⑦ |
| O-8 Ⓓ | GM-14 ⑧ |
| O-9 Ⓒ | GS-15 ⑨ |
| W-2 Ⓞ | GM-15 ⑩ |
| W-3 Ⓝ | SES ⑪ |
| W-4 Ⓜ | |

# COMPLETING THE QUESTIONNAIRE

This survey is designed to collect information on officers' involvement, direct and indirect, with ALL TYPES OF COMPUTERS. **Physically operating the computer is only one aspect of computer involvement; other aspects include managing information resources, computer security, acquisition, programming, system design, and many others.**

In addition to learning which types of jobs **do** involve computers, we also need to know which types of jobs **do not** involve computers. Computers may be a hidden part of your job, such as embedded in a weapon system that you use. Or, if your computer involvement is limited, you may find yourself marking "not applicable" or "none" for many of the questions. THIS IS EXACTLY WHAT WE NEED TO KNOW, AS LONG AS IT IS AN ACCURATE REFLECTION OF WHAT YOU DO IN YOUR CURRENT JOB.

Some questions may appear to be duplicates. This is because the same question may be asked with respect to different types of computers or different aspects of computer utilization. Read each section heading and question carefully to ensure you understand which aspect(s) the question is addressing.

If you do some of your computer work at home as part of your job (e.g., on your own micro-computer, via modem, etc.), include this work in your responses.

The remainder of this questionnaire is organized into five sections:

- C. Education, Training, Knowledge and Experience
- D. The ADA Programming Language
- E. Current Computer Usage
- F. Microcomputers
- G. Job Task Inventory

This section asks questions about your computer-related education, training and experience, and about the levels of knowledge required in order for you to perform effectively in your current job. The questions in this section refer to ANY type of computer.

For the purposes of this survey, the following definitions apply:

EDUCATION – formal classroom work in a degree-granting institution, whether or not you actually receive a degree.

TRAINING – all other sources for which you may or may not receive a certificate (e.g., Surface Warfare Officers School, Computer Security Course, Officer Candidate School, etc.)

---

1. What is your HIGHEST level of formal <u>education</u> involving computer science/technology or information resources management (IRM)?
MARK ONE ONLY.

| | |
|---|---|
| NO FORMAL COMPUTER SCIENCE EDUCATION OR RELATED COURSE WORK | ① |
| SOME FORMAL COURSE WORK AT OTHER THAN COLLEGE LEVEL | ② |
| SOME COLLEGE (UNDERGRADUATE OR GRADUATE) LEVEL COURSE WORK | ③ |
| ASSOCIATE DEGREE | ④ |
| BACHELORS DEGREE OR SIGNIFICANT UNDERGRADUATE LEVEL COURSE WORK | ⑤ |
| MASTERS DEGREE OR SIGNIFICANT GRADUATE LEVEL COURSE WORK | ⑥ |
| PH.D. OR SIGNIFICANT DOCTORAL LEVEL COURSE WORK | ⑦ |

---

2. What portion(s) of your current job require(s) knowledge of computers, whether directly or indirectly? (e.g., computer security, programming, management, data entry, etc.)
MARK ALL THAT APPLY.

| | |
|---|---|
| NONE | ⓪ |
| PRIMARY JOB | ① |
| COLLATERAL DUTIES | ② |
| DUTY/WATCHSTANDING | ③ |

3. Indicate the source from which you have received the following types of training and education.

– Mark "NONE" if you have not received training in a subject.

– Mark "NONE, BUT NEEDED" for those areas in which you have not received training but feel that it would be valuable to you in your current job.

Mark ONE SOURCE ONLY for each item. If you have received a given type of training/education from more than one source, mark the source which has been most useful to you in your current job.

Column key:
- 0 NONE
- 1 NONE, BUT NEEDED
- 2 ACCESSION TRAINING/EDUCATION (E.G., USNA, OCS, ETC.)
- 3 NAVY/DOD CLASSROOM TRAINING/EDUCATION
- 4 NAVY-SPONSORED GRADUATE EDUCATION (E.G., NPS, ETC.)
- 5 OFF-DUTY EDUCATION
- 6 OFF-DUTY TRAINING
- 7 ON-THE-JOB TRAINING
- 8 VENDOR TRAINING

| Item | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|---|---|
| a. | ADP acquisition management | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ |
| b. | ADP management | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ |
| c. | ADP risk management | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ |
| d. | ADP security | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ |
| e. | Assembling/compiling | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ |
| f. | Computer graphics | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ |
| g. | Computer hardware/software selection | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ |
| h. | Computer maintenance | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ |
| i. | Computer programming (in general) | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ |
| j. | Computer programming (specific languages) | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ |
| k. | Computer simulation/modeling techniques | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ |
| l. | Computer theory | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ |
| m. | Computer wargaming | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ |
| n. | Configuration management | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ |
| o. | Contract administration | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ |
| p. | Data base design | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ |
| q. | Data communications | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ |
| r. | Graphics design | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ |
| s. | Job control language | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ |
| t. | Keyboard data entry | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ |
| u. | Life cycle management | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ |
| v. | Local area networks | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ |
| w. | Operating systems | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ |
| x. | Planning, Programming and Budgeting System (PPBS) | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ |
| y. | Project management | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ |
| z. | Robotics | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ |
| aa. | Software engineering | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ |
| bb. | Spreadsheet development | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ |
| cc. | Systems analysis and design | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ |
| dd. | Troubleshooting hardware problems | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ |
| ee. | Typing | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ |
| ff. | Weapons system computer operation | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ |
| gg. | Wide area networks | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ |
| hh. | Word processing | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ |
| ii. | Writing of contract work statements | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ |

4. In general, has the Navy provided you with adequate information systems training for the information management and technology aspects of your current job?

DON'T KNOW ⓪
NO ①
YES ②

5. Indicate how adequate you feel your level of knowledge is in the following areas, **as it relates to your current job.** IF YOUR JOB DOES NOT REQUIRE YOU TO HAVE KNOWLEDGE IN A GIVEN AREA, MARK "NOT APPLICABLE."

Rating scale:
0. NOT APPLICABLE
1. COMPLETELY INADEQUATE
2. MODERATELY INADEQUATE
3. BARELY INADEQUATE
4. BORDERLINE
5. BARELY ADEQUATE
6. MODERATELY ADEQUATE
7. COMPLETELY ADEQUATE

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|---|
| a. ADP acquisition management | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| b. ADP management | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| c. ADP risk management | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| d. ADP security | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| e. Assembling/compiling | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| f. Computer graphics | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| g. Computer hardware/software selection | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| h. Computer maintenance | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| i. Computer programming (in general) | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| j. Computer programming (specific languages) | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| k. Computer simulation/modeling techniques | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| l. Computer theory | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| m. Computer wargaming | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| n. Configuration management | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| o. Contract administration | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| p. Data base design | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| q. Data communications | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| r. Graphics design | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| s. Job control language | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| t. Keyboard data entry | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| u. Life cycle management | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| v. Local area networks | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| w. Operating systems | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| x. Planning, Programming and Budgeting System (PPBS) | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| y. Project management | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| z. Robotics | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| aa. Software engineering | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| bb. Spreadsheet development | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| cc. Systems analysis and design | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| dd. Troubleshooting hardware problems | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| ee. Typing | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| ff. Weapons system computer operation | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| gg. Wide area networks | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| hh. Word processing | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| ii. Writing of contract work statements | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |

**ADA has become the Department of Defense (DoD) standard as a high-order programming language. The following questions are about ADA:**

6. Have you heard of the ADA programming language?

NO (SKIP TO QUESTION #13) ①
YES ②

7. To what extent are you familiar with DoD and/or Navy policy regarding the use of ADA in weapons system applications?

NOT AT ALL ①
VERY SLIGHTLY ②
SLIGHTLY ③
TO SOME EXTENT ④
TO A MODERATE EXTENT ⑤
EXTENSIVELY ⑥
VERY EXTENSIVELY ⑦

8. To what extent are you familiar with DOD and/or Navy policy regarding the use of ADA in non-tactical applications?

NOT AT ALL ①
VERY SLIGHTLY ②
SLIGHTLY- ③
TO SOME EXTENT ④
TO A MODERATE EXTENT ⑤
EXTENSIVELY ⑥
VERY EXTENSIVELY ⑦

9. Indicate which of the following functions you have performed using the ADA programming language or ADA constructs.

NONE ⓪
DESIGNED. OR ASSISTED IN DESIGNING. A SYSTEM THAT WILL BE PROGRAMMED PRIMARILY IN ADA ①
DEVELOPED A PROGRAM DESIGN LANGUAGE (PDL). CONSTRUCTED A FLOW CHART. OR DEVELOPED AN ALGORITHMIC LANGUAGE FOR AN ADA PROGRAM OR SYSTEM ②
CODED TESTED. OR DEBUGGED AN ADA PROGRAM OR PROJECT ③
UPDATED OR MAINTAINED AN ADA PROGRAM OR PROJECT ④

10. Have you had formal college-level or graduate-level computer science or software engineering courses in ADA? (This includes graduate education at the Naval Postgraduate School.)

NO ①
YES ②

11. Have you had formal DoD-sponsored training in ADA? (This DOES NOT include graduate education at the Naval Postgraduate School.)

NO ①
YES ②

12. Do you feel that you need more training in ADA to effectively perform your current job?

NO. ①
YES ②

PLEASE

CONTINUE

ON

NEXT PAGE

This section asks questions about the types of computer hardware and software you use in your CURRENT JOB, the functions you perform on these systems and the functional fields your computer-related work supports. These questions refer to ANY size or type of computer system.

13. **Thinking about YOUR JOB AS A WHOLE (not just the computer-related portion),** how frequently do you use (i.e., physically work with) the following types of computers in your current job?

Scale:
- 7. ALWAYS
- 6. ALMOST ALWAYS
- 5. FREQUENTLY
- 4. ROUTINELY
- 3. OCCASIONALLY
- 2. ALMOST NEVER
- 1. NEVER (i.e., available but don't use)
- 0. NOT APPLICABLE (i.e., not available)

1. Microcomputers (e.g., PC, MacIntosh, Zenith, laptop, etc.) ⓪①②③④⑤⑥⑦
2. Technical workstations (i.e., a high-performance micro or mini specialized for graphics, design, etc.) ⓪①②③④⑤⑥⑦

3. Minicomputers ⓪①②③④⑤⑥⑦

4. Mainframes ⓪①②③④⑤⑥⑦

5. Supercomputers ⓪①②③④⑤⑥⑦
6. Integrated real-time systems (e.g., Shipboard Non-tactical ADP Program (SNAP), Navy Intelligence Processing System (NIPS), Retail Operation Management (ROM), etc.) ⓪①②③④⑤⑥⑦

7. Technical/tactical systems (e.g., fire control, patient monitoring system, navigation, etc.) ⓪①②③④⑤⑥⑦

14. How many people under your supervision use ANY TYPE OF COMPUTER in their jobs? If you do not supervise anyone, or if the people you supervise do not use computers, enter "00" in each block.

| OFFICER | ENLISTED | CIVILIAN |
|---------|----------|----------|
| | | |
| ⓪⓪ | ⓪⓪ | ⓪⓪ |
| ①① | ①① | ①① |
| ②② | ②② | ②② |
| ③③ | ③③ | ③③ |
| ④④ | ④④ | ④④ |
| ⑤⑤ | ⑤⑤ | ⑤⑤ |
| ⑥⑥ | ⑥⑥ | ⑥⑥ |
| ⑦⑦ | ⑦⑦ | ⑦⑦ |
| ⑧⑧ | ⑧⑧ | ⑧⑧ |
| ⑨⑨ | ⑨⑨ | ⑨⑨ |

15. **Indicate the type of computer** on which YOU PERFORM the following applications in your current job. Be sure that you DO NOT include work that your subordinates perform for you. If you do not perform a function, mark "not applicable." Mark **one source only** for each application. If you use more than one type of computer for a given application, mark the type you use most often.

Columns:
0. NOT APPLICABLE
1. INTEGRATED SYSTEM
2. MAINFRAME
3. MICROCOMPUTER
4. MINICOMPUTER
5. SUPERCOMPUTER
6. TECHNICAL/TACTICAL SYSTEM
7. TECHNICAL WORKSTATION

| | Application | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|---|---|
| a. | Accounting/finance/budgeting | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| b. | Administration | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| c. | Artificial intelligence/expert systems | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| d. | Automated message handling/distribution | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| e. | Computer aided design/computer aided engineering (CAD/CAE) | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| f. | Computer aided software engineering (CASE) | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| g. | Command/control/communication/intelligence ($C^3I$) | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| h. | Communications | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| i. | Damage control | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| j. | Data analysis | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| k. | Database management | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| l. | Desktop publishing | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| m. | Electronic mail | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| n. | File/records management | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| o. | Flight planning | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| p. | Flight simulation | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| q. | Graphics | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| r. | Image processing | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| s. | Inventory control | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| t. | Medical diagnosis | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| u. | Mission briefing | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| v. | Mission debriefing | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| w. | Mission planning | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| x. | Modeling | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| y. | Navigation | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| z. | Personnel/manpower management | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| aa. | Pharmacology | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| bb. | Procurement | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| cc. | Programming | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| dd. | Project management | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| ee. | Realtime data acquisition | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| ff. | Scientific/engineering/research applications | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| gg. | Spreadsheets | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| hh. | Statistical analysis | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| ii. | Tactical evaluation | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| jj. | 3M | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| kk. | Wargaming | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| ll. | Word processing | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| mm. | Other (specify on last page) | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

16. Which of the following functional fields are you involved in when you use a computer? MARK ALL
THAT APPLY. (e.g., if you are in an aviation squadron, you might use a microcomputer for aviation
logistics and an embedded computer in your aircraft for tactical air warfare).

### ADMINISTRATIVE/MANAGEMENT/LOGISTICS SUPPORT

a. Accounting ①
b. Aviation logistics ②
c. Budgeting ③
d. Dental services ④
e. Facilities construction ⑤
f. Information resource management ⑥
g. Inspector general ⑦
h. Legal functions ⑧
i. Maintenance ⑨
j. Manpower, personnel and training ⑩
k. Medical services ⑪
l. Occupational safety and health ⑫
m. Operational safety ⑬
n. Other logistics ⑭
o. Payroll ⑮
p. Plans and policies ⑯
q. Platform construction, overhaul, modernization ⑰
r. Procurement ⑱
s. Religious services ⑲
t. Resource programming ⑳
u. Security assistance, technology transfer ㉑
v. Station support ㉒
w. Supply ㉓
x. Transportation ㉔
y. Other (specify on last page) ㉕

### STRATEGIC/TACTICAL/OPERATIONAL SUPPORT

a. Calibration of weapons ㊷
b. Communications ㊸
c. Cryptology ㊹
d. Diagnostic testing and maintenance ㊺
e. Fire control ㊻
f. Intelligence ㊼
g. Mapping, charting, geodosy ㊽
h. Meteorology ㊾
i. Oceanography ㊿
j. Reconnaissance �51
k. Simulation �52
l. Space technology �53
m. Strategic planning �54
n. Strike planning �55
o. Surveillance �56
p. Tactical training �57
q. War gaming �58
r. War planning �59
s. Warning �60
t. Weapon system training �61
u. Other (specify on last page) �62

### WARFARE MISSION AREAS

a. Air anti-submarine warfare ㉖
b. Amphibious warfare ㉗
c. Anti-air warfare ㉘
d. Anti-surface warfare ㉙
e. Chemical warfare ㉚
f. Command and control/C³I ㉛
g. Direct fleet support ㉜
h. Electronic warfare ㉝
i. Mine warfare ㉞
j. Space warfare ㉟
k. Special warfare ㊱
l. Strategic warfare ㊲
m. Strike air warfare ㊳
n. Submarine anti-submarine warfare ㊴
o. Surface anti-submarine warfare ㊵
p. Other (specify on last page) ㊶

### OTHER

a. Disaster relief coordination/planning ㊣
b. Research, development, testing,
   evaluation ㊤
c. Other (specify on last page) ㊥

**17. Thinking about YOUR JOB AS A WHOLE (not just the computer-related portion),** how frequently do you use the following brands of programming languages, language processors, operating systems or software applications in your current job?

Rating scale:
0. NOT APPLICABLE (i.e. not available)
1. NEVER (i.e. available but don't use)
2. ALMOST NEVER
3. OCCASIONALLY
4. SOMETIMES
5. FREQUENTLY
6. ALMOST ALWAYS
7. ALWAYS

### PROGRAMMING LANGUAGES

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|---|
| a. ADA | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| b. BASIC | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| c. C | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| d. COBOL | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| e. FORTRAN | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| f. LISP | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| g. Pascal | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| h. SQL | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| i. Other programming languages (specify on last page) | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |

### LANGUAGE PROCESSORS

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|---|
| a. Assembler | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| b. Compiler | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| c. Interpreter | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| d. Other language processors (specify on last page) | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |

### OPERATING SYSTEMS

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|---|
| a. Apple | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| b. CPM | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| c. Macintosh | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| d. MS-DOS | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| e. MVS | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| f. OS/2 | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| g. UNIX | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| h. VAX/VMS | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| i. VM | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| j. WANG | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| k. Other operating systems (specify on last page) | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |

### SOFTWARE PACKAGES AND PACKAGE TYPES (other than word processing)

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|---|
| a. Desktop publishing packages | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| b. Enable graphics | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| c. Harvard graphics | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| d. Other graphics packages (specify on last page) | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| e. Enable spreadsheet | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| f. Lotus 1-2-3 | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| g. Other spreadsheet packages (specify on last page) | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |

Rating scale (columns):
0. NOT APPLICABLE (i.e., not available)
1. NEVER (i.e., available but don't use)
2. ALMOST NEVER
3. OCCASIONALLY
4. SOMETIMES
5. FREQUENTLY
6. ALMOST ALWAYS
7. ALWAYS

### SOFTWARE PACKAGES AND PACKAGE TYPES (continued)

| | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|---|---|
| h. | DESQview | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| i. | Windows | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| j. | Other interface packages (specify on last page) | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| k. | SPSSx | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| l. | SAS | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| m. | Other statistical packages (specify on last page) | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| n. | dBase | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| o. | Enable DBMS | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| p. | ORACLE | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| q. | RBase | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| r. | FOCUS | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| s. | Other database management systems (specify on last page) | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| t. | BITCOM | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| u. | CROSSTALK | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| v. | Enable communications | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| w. | PROCOMM | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| x. | Other communications packages (specify on last page) | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| y. | Norton Utilities | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| z. | PC Tools | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| aa. | Other utilities (specify on last page) | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| bb. | "Canned" Navy applications (e.g., programs for tracking qualifications, conducting inventory, etc.) | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| cc. | Other applications (specify on last page) | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |

18. Do you use any personally-owned software on your government-owned computer to perform your job?

NO  ①
YES  ②

19. On average, what PERCENTAGE of your work day is spent working at the keyboard of a computer? (Example: If you spend 25 percent of your work day at a computer keyboard, enter "025" in the block). If you do not work at a computer keyboard, enter "000."

⓪⓪⓪
①①①
②②
③③
④④
⑤⑤
⑥⑥
⑦⑦
⑧⑧
⑨⑨

20. On average, what PERCENTAGE of your work day involves computers, whether directly or indirectly? (e.g., computer security, management, programming, acquisition, data entry, analyzing information from computer printouts, providing training, etc.) (Example: If 50 percent of your work day involves computers, enter "050" in the block.) If you are not involved with computers in any way, enter "000."

⓪⓪⓪
①①①
②②
③③
④④
⑤⑤
⑥⑥
⑦⑦
⑧⑧
⑨⑨

This section asks questions about issues related to microcomputers, to include office automation and information management. A microcomputer may be thought of as a personal computer (e.g., IBM, IBM-compatible, Apple/Macintosh series, Zenith or any other personal computer.) Laptops should also be included in your responses.

**21. Which statement best describes your command/unit/activity with respect to microcomputers?**

HAS NO MICROCOMPUTERS AND REQUIRES NONE ①

HAS NO MICROCOMPUTERS. BUT THE NEED
    HAS BEEN IDENTIFIED ②

HAS SOME MICROCOMPUTERS ③

HAS MANY MICROCOMPUTERS ④

**22. Do you feel that your command/unit/activity has the RIGHT NUMBER of microcomputers?**

NO. WE DON'T NEED ALL OF THE
    MICROCOMPUTERS WE HAVE ①

NO. WE NEED MORE ②

YES. WE HAVE JUST THE RIGHT NUMBER ③

**23. Do you have a government-provided microcomputer available?**

NO (SKIP TO QUESTION #39) ①

YES ②

**24. How frequently do you use it?**

NEVER ①

ALMOST NEVER ②

OCCASIONALLY ③

SOMETIMES ④

FREQUENTLY ⑤

ALMOST ALWAYS ⑥

ALWAYS ⑦

**25. Is your microcomputer part of a local area network (LAN)?**

DON'T KNOW ⓪

NO ①

YES (SKIP TO QUESTION #27) ②

**26. Is a LAN currently planned for your microcomputer?**

DON'T KNOW ⓪

NO (SKIP TO QUESTION #28) ①

YES ②

**27. Do you use a LAN to electronically route correspondence for chop, or to submit reports or information?**

NEVER ①

SOMETIMES ②

ALWAYS ③

**28. How has having a microcomputer affected the amount of PURELY ADMINISTRATIVE work you do?**

DON'T KNOW ⓪

NO CHANGE ①

DECREASED IT ②

INCREASED IT ③

**29. How has having a microcomputer affected your DAILY ROUTINE?**

DON'T KNOW ⓪

NO CHANGE ①

MADE IT MORE CUMBERSOME ②

MADE IT EASIER ③

**30. How has having a microcomputer affected your OVERALL PRODUCTIVITY?**

DON'T KNOW ⓪

NO CHANGE ①

DECREASED PRODUCTIVITY ②

INCREASED PRODUCTIVITY ③

**31. How has having a microcomputer affected the NUMBER OR TYPES OF REPORTS that you are required to submit in your current job?**

DON'T KNOW ⓪

NO CHANGE ①

I NOW SUBMIT MORE. MORE COMPLEX REPORTS ②

I NOW SUBMIT MORE. LESS COMPLEX REPORTS ③

I NOW SUBMIT FEWER. MORE COMPLEX REPORTS ④

I NOW SUBMIT FEWER. LESS COMPLEX REPORTS ⑤

**32. Are you required to submit reports or information on a data storage device? (e.g., floppy disks, tapes, etc.)**

NEVER ①

SOMETIMES ②

ALWAYS ③

**33. Have you received any formal training on your current microcomputer system?**

NO (SKIP TO QUESTION #36) ①

YES ②
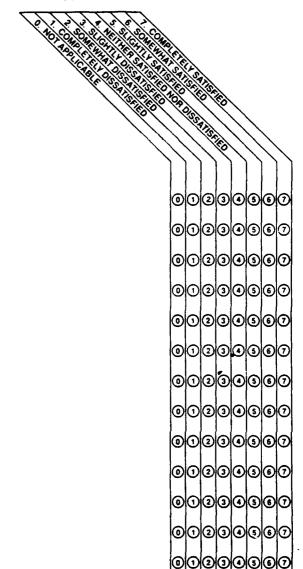
**34. How much time elapsed between your arrival in your current job and receiving your formal training?**

LESS THAN 6 MONTHS    ①
6 MONTHS TO 1 YEAR    ②
1 TO 2 YEARS    ③
MORE THAN 2 YEARS    ④

**35. How effective was this formal training in helping you use your microcomputer?**

NOT APPLICABLE: I WAS ALREADY SKILLED IN
    USING MY MICROCOMPUTER    ⓪
VERY INEFFECTIVE    ①
NEITHER EFFECTIVE NOR INEFFECTIVE    ②
VERY EFFECTIVE    ③

**36. Did you have to learn to use your current microcomputer system on-the-job?**

NO. I WAS ALREADY SKILLED IN USING MY
    MICROCOMPUTER SYSTEM    ①
NO. FORMAL TRAINING WAS COMPREHENSIVE
    ENOUGH THAT I DID NOT NEED ADDITIONAL
    ON-THE-JOB TRAINING    ②
YES. IN CONJUNCTION WITH FORMAL TRAINING ③
YES. COMPLETELY ON-THE-JOB    ④

**37. Do you feel that you need more training on your current microcomputer to effectively do your job?**

DON'T KNOW (SKIP TO QUESTION #40)    ⓪
NO (SKIP TO QUESTION #40)    ①
YES    ②

**38. Do you feel that such training would be cost effective (i.e., would the benefits outweigh the costs)?**

DON'T KNOW    ⓪
NO    ①
YES    ②

**39. If you do not have a government-provided microcomputer, to what degree would having one enhance your ability to perform your current job?**

NOT APPLICABLE: HAVE A GOVERNMENT-
    PROVIDED MICROCOMPUTER    ⓪
DON'T KNOW    ①
NOT AT ALL    ②
SOMEWHAT    ③
SIGNIFICANTLY    ④

**40. How many people under your direct supervision use MICROCOMPUTERS in their jobs? If you do not supervise anyone in a category, or if the people you supervise do not use microcomputers, enter "00" in the scale.**

| OFFICER | | ENLISTED | | CIVILIAN | |
|---|---|---|---|---|---|
| | | | | | |
| ⓪ ⓪ | | ⓪ ⓪ | | ⓪ ⓪ | |
| ① ① | | ① ① | | ① ① | |
| ② ② | | ② ② | | ② ② | |
| ③ ③ | | ③ ③ | | ③ ③ | |
| ④ ④ | | ④ ④ | | ④ ④ | |
| ⑤ ⑤ | | ⑤ ⑤ | | ⑤ ⑤ | |
| ⑥ ⑥ | | ⑥ ⑥ | | ⑥ ⑥ | |
| ⑦ ⑦ | | ⑦ ⑦ | | ⑦ ⑦ | |
| ⑧ ⑧ | | ⑧ ⑧ | | ⑧ ⑧ | |
| ⑨ ⑨ | | ⑨ ⑨ | | ⑨ ⑨ | |

**41. Is your command/unit/activity involved in a "paperless office/ship" program?**

DON'T KNOW    ⓪
NO    ①
YES    ②

**42. Is your command/unit/activity part of a software-sharing network? (e.g., bulletin board, inter-command sharing, etc.)**

DON'T KNOW    ⓪
NO    ①
YES    ②

**43. To what degree has lack of computer HARDWARE COMPATIBILITY in the Navy hindered your ability to use data from other commands/units/activities or to provide data for others' use?**

DON'T KNOW    ⓪
NOT AT ALL    ①
SOMEWHAT    ②
SIGNIFICANTLY    ③

**44. To what degree has lack of computer HARDWARE AVAILABILITY in the Navy hindered your ability to use data from other commands/units/activities or to provide data for others' use?**

DON'T KNOW    ⓪
NOT AT ALL    ①
SOMEWHAT    ②
SIGNIFICANTLY    ③

**45.** To what degree has lack of computer SOFTWARE COMPATIBILITY in the Navy hindered your ability to use data from other commands/units/activities or to provide data for others' use?

DON'T KNOW     ⓪
NOT AT ALL     ①
SOMEWHAT     ②
SIGNIFICANTLY     ③

**46.** To what degree has lack of system standardization resulted in redundant data bases and/or reporting requirements?

DON'T KNOW     ⓪
NOT AT ALL     ①
SOMEWHAT     ②
SIGNIFICANTLY     ③

**47.** With respect to microcomputers, how would you rate the degree of central planning and development of information systems in the Navy?

DON'T KNOW     ⓪
INADEQUATE     ①
ADEQUATE     ②
EXCESSIVE     ③

**48. Thinking about YOUR JOB AS A WHOLE (not just the computer-related portion),** how frequently do you use the following brands of word processing software with your microcomputer system in your current job?

Response scale: 0. NOT APPLICABLE (i.e., not available) / 1. NEVER (i.e., available, but don't use) / 2. ALMOST NEVER / 3. OCCASIONALLY / 4. SOMETIMES / 5. FREQUENTLY / 6. ALMOST ALWAYS / 7. ALWAYS

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|---|
| a. Appleworks | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| b. Display Write series | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| c. Enable | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| d. Machine specific (e.g., WANG, XEROX, etc.) | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| e. MacWrite | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| f. Word | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| g. MultiMate | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| h. Office Writer | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| i. Peachtext | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| j. PFS: Write | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| k. Sprint | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| l. WordStar | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| m. WordPerfect | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| n. Other (specify on last page) | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |

49. How satisfied are you with the brand(s) of word processing software that you use in your current job? If you do not use a given software package, mark "not applicable."

Rating scale (columns):
0 - NOT APPLICABLE
1 - COMPLETELY DISSATISFIED
2 - SOMEWHAT DISSATISFIED
3 - SLIGHTLY DISSATISFIED
4 - NEITHER SATISFIED NOR DISSATISFIED
5 - SLIGHTLY SATISFIED
6 - SOMEWHAT SATISFIED
7 - COMPLETELY SATISFIED

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|---|
| a. Appleworks | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| b. Display Write series | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| c. Enable | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| d. Machine specific (e.g., WANG, ZEROX, etc.) | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| e. MacWrite | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| f. Word | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| g. MultiMate | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| h. Office Writer | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| i. Peachtext | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| j. PFS: Write | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| k. Sprint | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| l. WordStar | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| m. WordPerfect | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| n. Other (specify on last page) | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

50. Do you have a microcomputer at home?

NO (SKIP TO SECTION G)   1
YES   2

51. Do you use your personally-owned microcomputer in direct performance of your assigned duties?

NO   1
YES   2

52. Do you have access to your worksite microcomputer from home or other remote site via communication link?

DOES NOT APPLY; DO NOT HAVE A MICROCOMPUTER AT WORK   0
NO   1
YES   2

# PLEASE TURN

# TO PAGE 30

# AND CONTINUE

# WITH THE SURVEY

The purpose of this section is to identify tasks, performed by naval officers, which are associated in some way with computers. Some tasks are directed at computer "experts" (e.g., "Develop computer architectural comcepts"), while other tasks are directed at officers involved with other computer areas. such as justifying funding for computers, managing computer security or just copying diskettes on a microcomputer.

Unless otherwise noted, and as applicable, please include all types of computers. from microcomputers to mainframes and tactical systems with embedded computers (and everything in between), in determining your response to each task.

• In completing the task inventory, **PLEASE RESPOND IN TERMS OF ALL WORK THAT YOU DO IN YOUR PRESENT REGULAR JOB,** including collateral duties. Do not include work done by subordinates or others in your command.

• **READ AND RESPOND TO EACH TASK STATEMENT**

• **IF THE TASK IS NOT A PART OF YOUR PRESENT JOB,** blacken the circle in the "no involvement" column.

• **IF YOU PERFORM THE TASK,** decide how much time you spend performing it, relative to all other tasks you perform in your job (i.e., **answer each task relative to your whole job, not just the computer-related portion.**) If you perform a task both when deployed and when not deployed, indicate an average amount of time spent on that task. Assign a value between 1 and 7 to each task you perform.

Time spent compared to whole job

> 0 – No involvement
> 1 – Very little
> 2 – Little
> 3 – Below average
> 4 – Average
> 5 – Above average
> 6 – Much
> 7 – Very much

USE NO. 2 PENCIL ONLY

INCORRECT MARKS: ⊗ ✓ ◕ ⊙
CORRECT MARK: ○ ● ○ ○

- Make black marks that completely fill the circle.
- Erase cleanly and completely any changes you make.
- Do not make stray marks in this booklet.

TIME SPENT COMPARED TO WHOLE JOB

- **Read and respond to each task statement.**

- **Assign a value between 1 and 7 for each task that you perform.**

- *If you do not perform the task, blacken the circle in the "NO INVOLVEMENT" column.*

Column headers (diagonal):
0. NO INVOLVEMENT
1. VERY LITTLE
2. LITTLE
3. BELOW AVERAGE
4. AVERAGE
5. ABOVE AVERAGE
6. MUCH
7. VERY MUCH

1. FORMAT DISKS OR TAPES
2. COPY DISK PACKS, DISKETTES OR TAPES
3. ENTER/EXTRACT DATA INTO/FROM COMPUTERS
4. DOWNLOAD/UPLOAD DATA
5. PROVIDE COMPUTER OUTPUT TO USERS (E.G., REPORTS, STATISTICS, ETC.)
6. ANALYZE OUTPUT DATA (I.E., COMPUTER PRINTOUTS, ETC.)
7. ANALYZE DATA WITH COMPUTER STATISTICAL PACKAGES
8. BUILD/MAINTAIN SPREADSHEETS
9. PRODUCE COMPUTER GRAPHICS
10. BUILD/MAINTAIN DATABASES
11. TYPE CORRESPONDENCE (I.E., MEMORANDA, REPORTS, ETC.) ON COMPUTERS
12. DESIGN REPORT FORMATS
13. MAINTAIN TAPE/DISK LIBRARY
14. SEND/RECEIVE ELECTRONIC MAIL
15. DESIGN COMPUTER PROGRAMS (E.G., USING FLOW CHARTS, PSEUDO CODE, ETC.)
16. WRITE COMPUTER PROGRAMS
17. ASSIST OTHERS IN WRITING COMPUTER PROGRAMS
18. DEBUG COMPUTER PROGRAMS
19. APPROVE COMPUTER PROGRAMS
20. MAINTAIN/UPDATE COMPUTER PROGRAMS
21. RUN COMPUTER PROGRAMS OR MODELS
22. USE DECISION SUPPORT SYSTEMS
23. EXECUTE COMPUTER DIAGNOSTICS/FAULT LOCALIZATION PROCEDURES
24. INTEGRATE COMPUTER SYSTEMS INTO DESIGN OF OPERATIONAL SYSTEMS (E.G., WEAPONS, RADARS, FLIGHT, ETC.)
25. DETERMINE WARTIME COMPUTER REQUIREMENTS FOR MOBILIZATION PLANNING
26. PLAN COMMAND TACTICAL INFORMATION SYSTEMS
27. PLAN/COORDINATE SHIP/AIRCRAFT/SUBMARINE COMPUTER INSTALLATION
28. INSPECT SHIPBOARD/AIRBORNE/SUBMARINE COMPUTER SYSTEMS
29. INTEGRATE AUTOMATION PLANS WITH TACTICAL OPERATIONS
30. DEVELOP COMPUTER WAR GAMES/SIMULATIONS/MODELS
31. USE COMPUTERS FOR WAR GAMING
32. OPERATE SIMULATORS
33. USE COMPUTERS TO DEPLOY ARMAMENTS
34. USE COMPUTERS FOR NAVIGATION
35. EVALUATE COMPUTER EQUIPMENT DURING EXERCISES/DEPLOYMENTS
36. DIRECT THE INFORMATION RESOURCE MANAGEMENT (IRM) PROGRAM WITHIN AN ACTIVITY, ORGANIZATION OR DEPARTMENT
37. DIRECT THE COMPUTER SYSTEMS WITHIN AN ACTIVITY, ORGANIZATION OR DEPARTMENT
38. DEVELOP/UPDATE COMPUTER SYSTEM OPERATING PROCEDURES

## MARKING INSTRUCTIONS

USE NO. 2 PENCIL ONLY

INCORRECT MARKS: ⊗ ⊘ ⊘ ⊙
CORRECT MARK: ○ ● ○ ○

· Make black marks that completely fill the circle.
· Erase cleanly and completely any changes you make.
· Do not make stray marks in this booklet.

TIME SPENT COMPARED TO WHOLE JOB

0. NO INVOLVEMENT
1. VERY LITTLE
2. LITTLE
3. BELOW AVERAGE
4. AVERAGE
5. ABOVE AVERAGE
6. MUCH
7. VERY MUCH

· Read and respond to each task statement.

· Assign a value between 1 and 7 for each task that you perform.

· If you do not perform the task, blacken the circle in the "NO INVOLVEMENT" column.

| Task | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|------|---|---|---|---|---|---|---|---|
| 39. DEVELOP PROCEDURES FOR PROVIDING COMPUTER SERVICES | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 40. DEVELOP COMPUTER EMERGENCY/CONTINGENCY ACTION PLANS | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 41. TEST COMPUTER EMERGENCY/CONTINGENCY ACTION PLANS | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 42. DEVELOP COMPUTER SURVIVABILITY PLANS | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 43. PERFORM/DIRECT COMPUTER DISASTER RECOVERY OPERATIONS | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 44. TRACK SYSTEM OR HARDWARE FAILURE TRENDS | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 45. PROVIDE GUIDANCE ON COMPUTER SYSTEM CAPABILITIES | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 46. COORDINATE WITH USERS OR CUSTOMERS TO RESOLVE COMPUTER PROBLEMS | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 47. DEVELOP COMPUTER BUDGETS | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 48. JUSTIFY COMPUTER BUDGETS | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 49. REVIEW COMPUTER BUDGETS | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 50. INSPECT/ACCEPT NEW COMPUTER EQUIPMENT | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 51. DIRECT INSTALLATION OF COMPUTER SYSTEMS | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 52. TRACK SYSTEM UTILIZATION RATES | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 53. ANALYZE NETWORK RELIABILITY/TRAFFIC FLOW | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 54. INSPECT COMPUTER FACILITIES | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 55. CONDUCT ON-SITE COMPUTER SYSTEM AUDITS | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 56. DEVELOP QUALITY CONTROL PLANS FOR COMPUTER SYSTEMS OR SERVICES | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 57. PERFORM QUALITY ASSURANCE OF COMPUTER SYSTEMS OR SERVICES | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 58. COORDINATE OFFICE AUTOMATION FUNCTIONS | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 59. DIRECT LOCAL AREA NETWORKS | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 60. ATTEND USERS GROUPS | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 61. REVIEW/UPDATE COMPUTER SITE ACCREDITATION PLAN | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 62. IDENTIFY NEED FOR ADDITIONAL MICROCOMPUTERS | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 63. DETERMINE MICROCOMPUTER VS. MAINFRAME USAGE FOR COMPUTER PROJECTS | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 64. EVALUATE PROPOSED SYSTEM MODIFICATIONS | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 65. DETERMINE/DEVELOP PROCEDURES FOR PURCHASING COMPUTERS AND COMPUTER EQUIPMENT | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 66. RECOMMEND COMPUTERS FOR PURCHASE | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 67. REVIEW REQUESTS FOR COMPUTERS | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 68. SELECT APPROVE/COMPUTERS FOR PURCHASE | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 69. RECOMMEND COMPUTER PERIPHERAL EQUIPMENT FOR PURCHASE | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 70. REVIEW REQUESTS FOR COMPUTER PERIPHERAL EQUIPMENT | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 71. SELECT/APPROVE COMPUTER PERIPHERAL EQUIPMENT FOR PURCHASE | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 72. RECOMMEND SOFTWARE PACKAGES FOR PURCHASE | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 73. REVIEW REQUESTS FOR SOFTWARE PACKAGES | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 74. SELECT/APPROVE SOFTWARE PACKAGES FOR PURCHASE | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 75. PRIORITIZE COMPUTER RESOURCES REQUESTS | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 76. EXPEND COMPUTER RESOURCES FUNDS | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 77. COORDINATE COMPUTER CONTRACT ADMINISTRATION | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 78. EVALUATE CONTRACTOR SYSTEM SPECIFICATIONS | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |

USE NO. 2 PENCIL ONLY

INCORRECT MARKS: ⊗ ⊘ ⊘ ◐
CORRECT MARK: ○ ● ○ ○

- Make black marks that completely fill the circle.
- Erase cleanly and completely any changes you make.
- Do not make stray marks in this booklet.

**TIME SPENT COMPARED TO WHOLE JOB**

0 NO INVOLVEMENT
1 VERY LITTLE
2 LITTLE
3 BELOW AVERAGE
4 AVERAGE
5 ABOVE AVERAGE
6 MUCH
7 VERY MUCH

- **Read and respond to each task statement.**

- **Assign a value between 1 and 7 for each task that you perform.**

- **If you do not perform the task, blacken the circle in the "NO INVOLVEMENT" column.**

79. PROVIDE TECHNICAL EXPERTISE FOR COMPUTER SYSTEM CONTRACT NEGOTIATIONS/SPECIFICATIONS — ⓪①②③④⑤⑥⑦
80. ADMINISTER CONTRACTS FOR COMPUTER EQUIPMENT — ⓪①②③④⑤⑥⑦
81. MONITOR COMPUTER-RELATED ENGINEERING CHANGE PROPOSALS (ECP) OR UPGRADES — ⓪①②③④⑤⑥⑦
82. CONDUCT COST/BENEFIT ANALYSES OF COMPUTER SYSTEMS — ⓪①②③④⑤⑥⑦
83. PERFORM LIFE CYCLE COST ANALYSIS OF COMPUTER SYSTEMS — ⓪①②③④⑤⑥⑦
84. DEVELOP STATEMENTS OF WORK (SOW) FOR COMPUTER SYSTEMS — ⓪①②③④⑤⑥⑦
85. DEVELOP REQUESTS FOR PROPOSALS (RFP) FOR COMPUTER SYSTEMS — ⓪①②③④⑤⑥⑦
86. PREPARE MISSION ELEMENTS NEEDS (MENS) STATEMENTS FOR COMPUTER SYSTEMS — ⓪①②③④⑤⑥⑦
87. PREPARE SYSTEM DECISION PAPERS (SDP) FOR COMPUTER SYSTEMS — ⓪①②③④⑤⑥⑦
88. PREPARE OPERATIONAL REQUIREMENT (OR) DOCUMENTS FOR COMPUTER SYSTEMS — ⓪①②③④⑤⑥⑦
89. PREPARE DECISION COORDINATING PAPERS (DCP) FOR COMPUTER SYSTEMS — ⓪①②③④⑤⑥⑦
90. REVIEW PROCUREMENT PACKAGES — ⓪①②③④⑤⑥⑦
91. MONITOR COMMERCIAL VENDOR SERVICES — ⓪①②③④⑤⑥⑦
92. DEVELOP IRM SECURITY PLANS/POLICIES — ⓪①②③④⑤⑥⑦
93. DEVELOP IRM SECURITY PROGRAMS/PROCEDURES — ⓪①②③④⑤⑥⑦
94. DIRECT/COORDINATE IRM SECURITY PROGRAMS — ⓪①②③④⑤⑥⑦
95. COORDINATE PHYSICAL SECURITY REQUIREMENTS FOR COMPUTER FACILITIES — ⓪①②③④⑤⑥⑦
96. INVESTIGATE COMPUTER-RELATED SECURITY VIOLATIONS — ⓪①②③④⑤⑥⑦
97. PREPARE/REVIEW IRM SECURITY INCIDENT REPORTS — ⓪①②③④⑤⑥⑦
98. CONTROL ACCESS TO COMPUTER SYSTEMS OR NETWORKS — ⓪①②③④⑤⑥⑦
99. ENSURE COMPLIANCE WITH COMMUNICATIONS SECURITY (COMSEC)/OPERATIONS SECURITY (OPSEC) REQUIREMENTS — ⓪①②③④⑤⑥⑦
100. CONDUCT THREAT/VULNERABILITY ASSESSMENTS OF COMPUTER SYSTEMS — ⓪①②③④⑤⑥⑦
101. CONDUCT THREAT/VULNERABILITY ASSESSMENTS OF COMPUTER FACILITIES — ⓪①②③④⑤⑥⑦
102. DEVELOP PHYSICAL SECURITY PLANS/POLICIES FOR COMPUTER FACILITIES — ⓪①②③④⑤⑥⑦
103. DEVELOP PHYSICAL SECURITY PROGRAMS/PROCEDURES FOR COMPUTER FACILITIES — ⓪①②③④⑤⑥⑦
104. DIRECT/COORDINATE PHYSICAL SECURITY PROGRAM FOR COMPUTER FACILITIES — ⓪①②③④⑤⑥⑦
105. PLAN TEMPEST HAZARD SAFEGUARDS — ⓪①②③④⑤⑥⑦
106. CONDUCT TEMPEST EVALUATIONS/INSPECTIONS — ⓪①②③④⑤⑥⑦
107. COORDINATE COMPUTER EQUIPMENT MAINTENANCE/REPAIR — ⓪①②③④⑤⑥⑦
108. COORDINATE COMPUTER EQUIPMENT OVERHAUL/REPLACEMENT — ⓪①②③④⑤⑥⑦
109. PERFORM EQUIPMENT MAINTENANCE — ⓪①②③④⑤⑥⑦
110. COORDINATE/MONITOR MAINTENANCE CONTRACTS FOR COMPUTERS — ⓪①②③④⑤⑥⑦

USE NO. 2 PENCIL ONLY

INCORRECT MARKS: ⊗ ⊘ ◐ ⊙
CORRECT MARK: ○ ● ○ ○

- Make black marks that completely fill the circle.
- Erase cleanly and completely any changes you make.
- Do not make stray marks in this booklet.

**TIME SPENT COMPARED TO WHOLE JOB**

0. NO INVOLVEMENT
1. VERY LITTLE
2. LITTLE
3. BELOW AVERAGE
4. AVERAGE
5. ABOVE AVERAGE
6. MUCH
7. VERY MUCH

- Read and respond to each task statement.

- Assign a value between 1 and 7 for each task that you perform.

- If you do not perform the task, blacken the circle in the "NO INVOLVEMENT" column.

111. DIRECT THE COMPUTER TRAINING PROGRAM WITHIN AN ACTIVITY, ORGANIZATION OR DEPARTMENT
112. DEVELOP COMPUTER TRAINING PLANS (OTHER THAN ON-THE-JOB TRAINING (OJT))
113. CONDUCT COMPUTER TRAINING (OTHER THAN OJT)
114. DEVELOP ON-THE-JOB COMPUTER TRAINING PLANS
115. CONDUCT ON-THE-JOB COMPUTER TRAINING
116. DEVELOP COMPUTER SECURITY TRAINING PLANS
117. CONDUCT COMPUTER SECURITY TRAINING
118. DEVELOP COMPUTER-AIDED INSTRUCTION (CAI)
119. IDENTIFY REQUIREMENTS FOR COMPUTER SYSTEM MODIFICATIONS OR NEW TECHNOLOGY
120. PLAN/COORDINATE COMPUTER SYSTEMS UPGRADES, REPLACEMENTS, INTEGRATION
121. DESIGN COMPUTER EQUIPMENT MODIFICATIONS
122. PERFORM OPERATING SYSTEM CONVERSIONS
123. PERFORM COMPUTER CONFIGURATION CHANGES
124. COORDINATE LONG-RANGE COMPUTER SYSTEMS PLANNING
125. PLAN EXPERT SYSTEMS OR ARTIFICIAL INTELLIGENCE DEVELOPMENT
126. DESIGN EXPERT SYSTEMS OR ARTIFICIAL INTELLIGENCE
127. BUILD/PROGRAM EXPERT SYSTEMS OR ARTIFICIAL INTELLIGENCE
128. EVALUATE EXPERT SYSTEMS OR ARTIFICIAL INTELLIGENCE
129. USE EXPERT SYSTEMS OR ARTIFICIAL INTELLIGENCE
130. PLAN CONSTRUCTION/MODIFICATION/REPAIR OF COMPUTER FACILITIES
131. CONDUCT ENGINEERING SITE SURVEYS
132. REVIEW COMPUTER FACILITY DESIGNS
133. APPROVE/DISAPPROVE COMPUTER FACILITY DESIGNS
134. COORDINATE COMPUTER FACILITY CONSTRUCTION PROJECTS WITH ENGINEERS/CONTRACTORS
135. PROVIDE ON-SITE ENGINEERING TECHNICAL ASSISTANCE FOR COMPUTER FACILITY CONSTRUCTION
136. WRITE FUNCTIONAL DESCRIPTIONS OR REQUIREMENTS DOCUMENTS FOR COMPUTER SYSTEMS
137. REVIEW FUNCTIONAL DESCRIPTIONS OR REQUIREMENTS DOCUMENTS FOR COMPUTER SYSTEMS
138. DETERMINE OPERATING SYSTEM REQUIREMENTS FOR AN ACTIVITY, ORGANIZATION OR DEPARTMENT
139. DETERMINE DATABASE MANAGEMENT SYSTEM REQUIREMENTS FOR AN ACTIVITY, ORGANIZATION OR DEPARTMENT
140. DETERMINE DATA COMMUNICATIONS REQUIREMENTS FOR AN ACTIVITY, ORGANIZATION OR DEPARTMENT
141. DETERMINE COMPUTER GRAPHICS REQUIREMENTS FOR AN ACTIVITY, ORGANIZATION OR DEPARTMENT
142. DETERMINE WORD PROCESSING REQUIREMENTS FOR AN ACTIVITY, ORGANIZATION OR DEPARTMENT

- Read and respond to each task statement.

- Assign a value between 1 and 7 for each task that you perform.

- If you do not perform the task, blacken the circle in the "NO INVOLVEMENT" column.

**TIME SPENT COMPARED TO WHOLE JOB**

0. NO INVOLVEMENT
1. VERY LITTLE
2. LITTLE
3. BELOW AVERAGE
4. AVERAGE
5. ABOVE AVERAGE
6. MUCH
7. VERY MUCH

| Task | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|------|---|---|---|---|---|---|---|---|
| 143. DETERMINE SPREADSHEET REQUIREMENTS FOR AN ACTIVITY, ORGANIZATION OR DEPARTMENT | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 144. DETERMINE STATISTICAL REQUIREMENTS FOR AN ACTIVITY, ORGANIZATION OR DEPARTMENT | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 145. DETERMINE COMPUTER PROGRAMMING REQUIREMENTS FOR AN ACTIVITY, ORGANIZATION OR DEPARTMENT | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 146. DETERMINE SYSTEM INPUT/OUTPUT REQUIREMENTS FOR AN ACTIVITY, ORGANIZATION OR DEPARTMENT | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 147. DETERMINE INTEROPERABILITY REQUIREMENTS FOR AN ACTIVITY, ORGANIZATION OR DEPARTMENT | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 148. DETERMINE SOFTWARE/HARDWARE INTERFACE REQUIREMENTS FOR AN ACTIVITY, ORGANIZATION OR DEPARTMENT | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 149. EVALUATE/SELECT OPERATING SYSTEMS TO MEET REQUIREMENTS | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 150. EVALUATE/SELECT DATABASE MANAGEMENT SYSTEMS TO MEET REQUIREMENTS | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 151. EVALUATE/SELECT DATA COMMUNICATIONS PROGRAMS TO MEET REQUIREMENTS | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 152. EVALUATE/SELECT COMPUTER GRAPHICS PACKAGES TO MEET REQUIREMENTS | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 153. EVALUATE/SELECT WORD PROCESSING PACKAGES TO MEET REQUIREMENTS | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 154. EVALUATE/SELECT SPREADSHEET PACKAGES TO MEET REQUIREMENTS | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 155. EVALUATE/SELECT STATISTICAL PACKAGES TO MEET REQUIREMENTS | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 156. EVALUATE/SELECT COMPUTER LANGUAGE(S) TO MEET REQUIREMENTS | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 157. DESIGN COMPUTER SYSTEM TO MEET INPUT/OUTPUT, INTEROPERABILITY AND SOFTWARE/HARDWARE INTERFACE REQUIREMENTS | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 158. DETERMINE COMPUTER SECURITY REQUIREMENTS | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 159. DETERMINE COMPUTER INSTALLATION REQUIREMENTS | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 160. READ/ANALYZE TECHNICAL PUBLICATIONS ABOUT COMPUTER SYSTEMS | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 161. DESIGN HARDWARE SYSTEMS | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 162. DESIGN OPERATING SYSTEMS | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 163. DETERMINE PHYSICAL LAYOUT OF COMPUTER CENTER | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 164. DESIGN COMPUTER NETWORKS (E.G., LANS, MAINFRAME COMMUNICATION LINKS, ETC.) | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 165. DEVELOP COMPUTER SYSTEM IMPLEMENTATION PLANS | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 166. WRITE COMPUTER PROGRAM DOCUMENTATION | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 167. WRITE COMPUTER SYSTEMS MAINTENANCE MANUALS | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 168. WRITE CONFIGURATION MANAGEMENT PLANS | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 169. DETERMINE COMPATIBILITY OF COMPUTER SYSTEMS FOR IMPLEMENTATION | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 170. DEVELOP SYSTEM LOGIC | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 171. DEVELOP/EVALUATE COMPUTER GRAPHICS SOFTWARE SYSTEMS | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 172. DEVELOP/EVALUATE DATA COMMUNICATIONS PROGRAMS | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 173. EVALUATE COMPUTER-AIDED SOFTWARE ENGINEERING (CASE) TOOLS | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| 174. DEVELOP SYSTEM INTEGRATION/OFFICE AUTOMATION PLANS | ⓪ | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |

USE NO. 2 PENCIL ONLY

INCORRECT MARKS: ⊗ ⊘ ⊘ ⊙
CORRECT MARK: ○ ● ○ ○

- Make black marks that completely fill the circle.
- Erase cleanly and completely any changes you make.
- Do not make stray marks in this booklet.

TIME SPENT COMPARED TO WHOLE JOB

- Read and respond to each task statement.

- Assign a value between 1 and 7 for each task that you perform.

- If you do not perform the task, blacken the circle in the "NO INVOLVEMENT" column.

0. NO INVOLVEMENT
1. VERY LITTLE
2. LITTLE
3. BELOW AVERAGE
4. AVERAGE
5. ABOVE AVERAGE
6. MUCH
7. VERY MUCH

175. DEVELOP COMPUTER SYSTEM TESTS/SIMULATIONS — ⓪①②③④⑤⑥⑦
176. CONDUCT COMPUTER SYSTEM DEVELOPMENTAL TESTS — ⓪①②③④⑤⑥⑦
177. CONDUCT COMPUTER SYSTEM OPERATIONAL TESTS — ⓪①②③④⑤⑥⑦
178. ANALYZE/EVALUATE COMPUTER SYSTEM TEST DATA — ⓪①②③④⑤⑥⑦

# PLEASE TURN

# TO PAGE 39

# TO ENTER

# ADDITIONAL ITEMS

# OR COMMENTS

This page cannot be optically scanned. To preserve comment confidentiality, it will be separated from the booklet as the booklet is processed by the optical scanner.

Your recommendations and comments on the survey are welcomed. Please, DO NOT ENTER CLASSIFIED INFORMATION ON THIS PAGE.

In order to relate comments to job classifications, please provide the following demographic information.

Grade: _____     Job Title: _____

Designator: _____     Type of Command (ship, squadron, etc.): _____

_____

## RECOMMENDED DATA

(If you have additional items from other sections to include, please write them below, next to their corresponding number.)

15 _____

16 _____

17 _____

48 _____

49 _____

## COMMENTS

_____

_____

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If needed, DO NOT staple additional sheets to this booklet.

## THANK YOU FOR COMPLETING THIS SURVEY.

Please give the booklet to your command representative coordinating the survey administration.

Appendix B:   Findings on 35 Officer Communities
Information for Reading the Listings

1. The 35 Navy officer communities are listed with the designators included in each community.  The groupings are based on The Manual of Navy Officer Manpower and Personnel Classifications, Volume I, Major Code Structures (NAVPERS 15839G) March 1990.

2. Each community listing includes the following groups of findings:

Population

Mail Sample

Return Sample

Response Rate

Sample of officers with more than 3 months in their jobs

Number of Computer Users

- Percentage of computer users for each type of hardware (Percentages do not total to 100 due to the number of officers who either did not respond or responded they did not have access to the type of computer.)

- Average responses to "how often used" for each type of hardware (based on summing the responses to the scale from (2) Almost Never to (7) Always for each type of computer hardware and dividing by the number of respondents)

- Percentage of officers directly or indirectly involved with computers (Percentages will not always add to 100 due to differences in the number of computer users for each designator community.)

- Percentage of officers who used each type of software

- Top software brand name

- Functional areas where computers were used

## NAVY OFFICER COMMUNITIES

| GENERAL UNRESTRICTED LINE | DESIGNATORS |
|---|---|
| General Unrestricted Line Officer | 110X |
| Surface Warfare Officer | 111X, 116X |
| Submarine Warfare Officer | 112X, 117X |
| Special Warfare Officer (SPECWAR) | 113X, 118X |
| Special Operations Officer (SPECOPS) | 114X, 119X |
| Materiel Professional Officer (MP) | 12XX and all designators ending in "4" |
| Aviation Warfare Officer - General | 130X |
| Aviation Warfare Officer - Pilot | 131X, 139X |
| Aviation Warfare Officer - Naval Flight Officer | 132X, 137X |

| RESTRICTED LINE | |
|---|---|
| Engineering Duty Officer | 141X, 144X, 146X |
| Aerospace Engineering Duty Officer | 150X, 151X |
| Aerospace Maintenance Duty Officer | 152X |
| Aviation Duty Officer | 154X, |
| Special Duty Officer - Cryptology | 161X |
| Special Duty Officer - Intelligence | 163X |
| Special Duty Officer - Public Affairs Officer | 165X |
| Special Duty Officer - Oceanography | 180X |

| STAFF CORPS | |
|---|---|
| Medical Corps Officer | 210X |
| Dental Corps Officer | 220X |
| Medical Service Corps Officer | 230X |
| Judge Advocate General Corps Officer | 250X |
| Nurse Corps Officer | 290X |
| Supply Corps Officer | 310X |
| Chaplain Corps Officer | 410X |
| Civil Engineering Corps Officer | 510X |

| LIMITED DUTY OFFICER/WARRANT OFFICER | |
|---|---|
| Limited Duty Officer - Surface | 61XX |
| Limited Duty Officer - Submarine | 62XX |
| Limited Duty Officer - Aviation | 63XX |
| Limited Duty Officer - General | 64XX |
| Limited Duty Officer - Staff Corps | 65XX |
| Chief Warrant Officer - Surface | 71XX |
| Chief Warrant Officer - Submarine | 72XX |
| Chief Warrant Officer - Aviation | 73XX |
| Chief Warrant Officer - General | 74XX |
| Chief Warrant Officer - Staff | 75XX |

## General Unrestricted Line (110X)

Population: 2695   Mailed: 401   Sample: 264   Response rate: 65.8%
Sample of officers with more than 3 months in their jobs:   240

****
**COMPUTER USERS**

Of the 240 officers with more than 3 months in their jobs, 86.6 percent (207) are using computers.  The following types of computers are being used:

|  | USE | How often used | Available, don't use |
|---|---|---|---|
| Microcomputer | 84.4% | Frequently (5.2) | 8.4% |
| Technical work-station | 19.7% | Routinely (3.9) | 14.2% |
| Mainframes | 19.4% | Routinely to frequently (4.5) | 16.0% |
| Minicomputer | 16.5% | Occasionally to routinely (3.6) | 15.3% |
| Integrated real-time systems | 9.4% | Routinely to frequently (4.4) | 9.8% |
| Tactical systems | 2.1% | Occasionally to routinely (3.6) | 10.1% |
| Supercomputers | 1.3% | Frequently (5.0) | 7.7% |

***

**PERCENTAGE OF OFFICERS DIRECTLY OR INDIRECTLY INVOLVED WITH COMPUTERS:**

| Uses Only | Uses and Supervises | Supervise Only | Average percent of day involved in computers |
|---|---|---|---|
| 21.4% | 65.3% | 9.6% | 41% |

***

**SOFTWARE BEING USED**

The following types and brands of software are being used by the 207 computer users:

| Type software | % of 207 using | Top brand used |
|---|---|---|
| Word processing | 92.8% | Wordperfect |
| Databases | 50.2% | DBASE |
| Graphics | 49.3% | Harvard graphics |
| Spreadsheets | 43.0% | Lotus 123 |
| Utilities | 27.1% | Norton Utilities |
| Communications | 20.8% | PROCOMM |
| Interfaces | 15.5% | Windows |
| Statistics | 1.4% | SPSSx |

***

**FUNCTIONAL AREAS**

The 207 computer users use their computers in the following functional categories:

|  | ADMIN | WARFARE | STRATEGIC | OTHER |
|---|---|---|---|---|
| % of users | 83.1% | 13.5% | 18.4% | 9.7% |

## Surface Warfare (111X, 116X)

Population: 10226   Mailed: 409   Sample: 279   Response rate: 68.2%
Sample of officers with more than 3 months in their jobs:   252

\*\*\*\*
**COMPUTER USERS**
   Of the 252 officers with more than 3 months in their jobs, 96.0 percent
      (242) are using computers.  The following types of computers are being
      used:

|  | USE | How often used | Available, don't use |
|---|---|---|---|
| Microcomputer | 92.9% | Frequently (5.1) | 4.8% |
| Integrated real-time systems | 45.2% | Routinely to frequently (4.4) | 8.0% |
| Tactical systems | 41.7% | Routinely to frequently (4.4) | 8.3% |
| Minicomputer | 23.0% | Routinely (4.1) | 12.7% |
| Technical work-station | 20.5% | Occasionally to routinely (3.7) | 14.9% |
| Mainframes | 17.1% | Routinely (4.1) | 11.5% |
| Supercomputers | 2.0% | Occasionally (3.0) | 7.2% |

\*\*\*

**PERCENTAGE OF OFFICERS DIRECTLY OR INDIRECTLY INVOLVED WITH COMPUTERS:**

| Uses Only | Uses and Supervises | Supervise Only | Average percent of day involved in computers |
|---|---|---|---|
| 15.1% | 81.0% | 4.0% | 28% |

\*\*\*

**SOFTWARE BEING USED**
   The following types and brands of software are being used by the 242
      computer users:

| Type software | % of 242 using | Top brand used |
|---|---|---|
| Word processing | 90.9% | Wordperfect |
| Graphics | 51.7% | Desktop Publishing |
| Databases | 49.2% | DBASE |
| Utilities | 42.1% | PC Tools |
| Spreadsheets | 33.9% | Lotus 123 |
| Interfaces | 19.4% | Windows |
| COmmunications | 10.3% | PROCOMM |
| Statistics | 2.9% | SAS |

\*\*\*

**FUNCTIONAL AREAS**
   The 242 computer users use their computers in the following functional
      categories:

|  | ADMIN | WARFARE | STRATEGIC | OTHER |
|---|---|---|---|---|
| % of users | 81.4% | 48.8% | 44.6% | 6.6% |

## Submarine Warfare (112X, 117X)

Population: 3950   Mailed:  390   Sample:  254   Response rate:  65.1%
Sample of officers with more than 3 months in their jobs:   221

****
**COMPUTER USERS**

Of the 221 officers with more than 3 months in their jobs, 96.4 percent (212) are using computers.  The following types of computers are being used:

| | USE | How often used | Available, don't use |
|---|---|---|---|
| Microcomputer | 90.5% | Routinely to frequently (4.4) | 7.3% |
| Tactical systems | 64.8% | Routinely to frequently (4.6) | 3.2% |
| Technical work-station | 24.7% | Occasionally to routinely (3.4) | 11.9% |
| Minicomputer | 21.9% | Occasionally to routinely (3.5) | 10.5% |
| Mainframes | 20.5% | Routinely (4.1) | 10.0% |
| Integrated real-time systems | 19.8% | Occasionally to routinely (3.6) | 10.6% |
| Supercomputers | .9% | Almost never to occasionally (2.5) | 5.0% |

***
**PERCENTAGE OF OFFICERS DIRECTLY OR INDIRECTLY INVOLVED WITH COMPUTERS:**

| Uses Only | Uses and Supervises | Supervise Only | Average percent of day involved in computers |
|---|---|---|---|
| 15.0% | 81.4% | 2.3% | 21% |

***
**SOFTWARE BEING USED**

The following types and brands of software are being used by the 212 computer users:

| Type software | % of 212 using | Top brand used |
|---|---|---|
| Word processing | 91.5% | Wordperfect |
| Graphics | 50.5% | Harvard Graphics |
| Databases | 47.2% | DBASE |
| Utilities | 39.2% | Norton Utilities |
| Spreadsheets | 38.7% | Lotus 123 |
| Communications | 12.3% | PROCOMM |
| Interfaces | 10.8% | Windows |
| Statistics | .5% | SPSSx |

***
**FUNCTIONAL AREAS**

The 212 computer users use their computers in the following functional categories:

| | ADMIN | WARFARE | STRATEGIC | OTHER |
|---|---|---|---|---|
| % of users | 70.8% | 65.1% | 64.2% | 4.7% |

## Special Warfare Officers (113X, 118X)

Population:   405   Mailed:   253   Sample:   114   Response rate:   45.1%
Sample of officers with more than 3 months in their jobs:     96

****
**COMPUTER USERS**
   Of the 96 officers with more than 3 months in their jobs, 82.3 percent
      (79) are using computers.  The following types of computers are being
      used:

| | USE | How often used | Available, don't use |
|---|---|---|---|
| Microcomputer | 82.3% | Frequently (4.8) | 12.5% |
| Technical work-stations | 20.2% | Occasionally (3.2) | 22.3% |
| Minicomputers | 15.8% | Occasionally to routinely (3.7) | 16.8% |
| Integrated real-time systems | 9.5% | Occasionally to routinely (3.3) | 11.6% |
| Mainframes | 7.4% | Routinely to frequently (4.6) | 11.6% |
| Tactical systems | 6.4% | Occasionally to routinely (3.5) | 13.8% |
| Supercomputers | 2.1% | Almost never to occasionally (2.5) | 12.6% |

***
   **PERCENTAGE OF OFFICERS DIRECTLY OR INDIRECTLY INVOLVED WITH COMPUTERS:**

| Uses Only | Uses and Supervises | Supervise Only | Average percent of day involved in computers |
|---|---|---|---|
| 25.0% | 57.3% | 9.4% | 25% |

***
**SOFTWARE BEING USED**
   The following types and brands of software are being used by the 79
      computer users:

| Type software | % of 79 using | Top brand used |
|---|---|---|
| Word processing | 94.9% | Wordperfect |
| Graphics | 60.8% | Harvard Graphics |
| Databases | 34.2% | DBASE |
| Spreadsheets | 30.4% | Lotus 123 |
| Utilities | 27.8% | Norton Utilities |
| Interfaces | 13.9% | Windows |
| Communications | 7.6% | PROCOMM |
| Statistics | 1.3% | SAS |

***
**FUNCTIONAL AREAS**
   The 79 computer users use their computers in the following functional
      categories:

| | ADMIN | WARFARE | STRATEGIC | OTHER |
|---|---|---|---|---|
| % of users | 70.9% | 74.7% | 39.2% | 11.4% |

## Special Operations Officers (114X, 119X)

Population:   399   Mailed:   260   Sample:   168   Response rate:   64.6%
Sample of officers with more than 3 months in their jobs:   141

****
## COMPUTER USERS
Of the 141 officers with more than 3 months in their jobs, 92.8 percent (129) are using computers.  The following types of computers are being used:

| | USE | How often used | Available, don't use |
|---|---|---|---|
| Microcomputer | 88.6% | Frequently (5.0) | 6.4% |
| Minicomputers | 19.0% | Routinely (4.1) | 13.9% |
| Technical work-stations | 16.3% | Occasionally to routinely (3.6) | 15.6% |
| Tactical systems | 13.9% | Occasionally to routinely (3.5) | 11.7% |
| Mainframes | 7.3% | Occasionally to routinely (3.5) | 13.1% |
| Integrated real-time systems | 2.9% | Occasionally (2.8) | 14.6% |
| Supercomputers | 1.5% | Almost never to occasionally (2.5) | 11.7% |

***
## PERCENTAGE OF OFFICERS DIRECTLY OR INDIRECTLY INVOLVED WITH COMPUTERS:

| Uses Only | Uses and Supervises | Supervise Only | Average percent of day involved in computers |
|---|---|---|---|
| 10.1% | 82.7% | 6.4% | 24% |

***
## SOFTWARE BEING USED
The following types and brands of software are being used by the 129 computer users:

| Type software | % of 129 using | Top brand used |
|---|---|---|
| Word processing | 96.1% | Wordperfect |
| Graphics | 57.4% | Desktop Publishing |
| Databases | 48.1% | DBASE |
| Spreadsheets | 38.0% | Lotus 123 |
| Utilities | 26.4% | Norton Utilities |
| Communications | 18.6% | PROCOMM |
| Interfaces | 17.1% | Windows |
| Statistics | 0.8% | SPSSx/SAS |

***
## FUNCTIONAL AREAS
The 129 computer users use their computers in the following functional categories:

| | ADMIN | WARFARE | STRATEGIC | OTHER |
|---|---|---|---|---|
| % of users | 83.7% | 38.8% | 20.9% | 12.4% |

## Materiel Professionals (12XX, XXX4)

Population:   885   Mailed:  317   Sample:  148   Response rate:  46.7%
Sample of officers with more than 3 months in their jobs:   129

****
COMPUTER USERS
   Of the 129 officers with more than 3 months in their jobs, 87.5 percent
     (112) are using computers.  The following types of computers are being
     used:

| | USE | How often used | Available, don't use |
|---|---|---|---|
| Microcomputer | 84.5% | Frequently (4.9) | 9.3% |
| Minicomputers | 33.1% | Routinely (3.8) | 22.8% |
| Technical work-stations | 25.0% | Occasionally to routinely (3.6) | 26.6% |
| Mainframes | 24.0% | Routinely (3.8) | 26.4% |
| Tactical systems | 13.2% | Routinely to frequently (4.3) | 11.6% |
| Integrated real-time systems | 10.2% | Occasionally to routinely (3.6) | 17.2% |
| Supercomputers | 1.6% | Almost never to occasionally (2.5) | 17.1% |

***
  PERCENTAGE OF OFFICERS DIRECTLY OR INDIRECTLY INVOLVED WITH COMPUTERS:

| Uses Only | Uses and Supervises | Supervise Only | Average percent of day involved in computers |
|---|---|---|---|
| 3.1% | 84.4% | 10.1% | 22.4% |

***
SOFTWARE BEING USED
   The following types and brands of software are being used by the 112
     computer users:

| Type software | % of 112 using | Top brand used |
|---|---|---|
| Word processing | 87.5% | Wordperfect |
| Graphics | 65.2% | Harvard graphics |
| Spreadsheets | 63.4% | Lotus 123 |
| Databases | 41.1% | DBASE |
| Utilities | 25.9% | Norton Utilities |
| Communications | 21.4% | PROCOMM |
| Interfaces | 21.4% | Windows |
| Statistics | 0.9% | SPSSx/SAS |

***
FUNCTIONAL AREAS
   The 112 computer users use their computers in the following functional
     categories:

| | ADMIN | WARFARE | STRATEGIC | OTHER |
|---|---|---|---|---|
| % of users | 88.4% | 32.1% | 15.2% | 21.4% |

## General Aeronautical Officers (130X)

Population:   189   Mailed:   175   Sample:   88   Response rate:   50.3%
Sample of officers with more than 3 months in their jobs:     81

****
### COMPUTER USERS
Of the 81 officers with more than 3 months in their jobs, 91.3 percent (73) are using computers. The following types of computers are being used:

| | USE | How often used | Available, don't use |
|---|---|---|---|
| Microcomputer | 86.4% | Almost always to frequently (5.3) | 7.4% |
| Integrated real-time systems | 23.5% | Routinely (3.9) | 8.6% |
| Minicomputers | 21.0% | Routinely to frequently (4.5) | 8.6% |
| Mainframes | 20.0% | Routinely to frequently (4.3) | 5.0% |
| Technical work-stations | 19.0% | Occasionally to routinely (3.7) | 10.1% |
| Tactical systems | 11.2% | Routinely (3.8) | 6.3% |
| Supercomputers | 2.5% | Occasionally (3.0) | 5.0% |

***
### PERCENTAGE OF OFFICERS DIRECTLY OR INDIRECTLY INVOLVED WITH COMPUTERS:

| Uses Only | Uses and Supervises | Supervise Only | Average percent of day involved in computers |
|---|---|---|---|
| 20.0% | 71.2% | 6.3% | 36% |

***
### SOFTWARE BEING USED
The following types and brands of software are being used by the 73 computer users:

| Type software | % of 73 using | Top brand used |
|---|---|---|
| Word processing | 94.5% | Wordperfect |
| Databases | 63.0% | DBASE |
| Graphics | 56.2% | Harvard graphics |
| Spreadsheets | 47.9% | Lotus 123 |
| Utilities | 43.8% | PC Tools |
| Communications | 27.4% | PROCOMM |
| Interfaces | 26.0% | Windows |
| Statistics | 6.8% | Other statistical packages |

***
### FUNCTIONAL AREAS
The 73 computer users use their computers in the following functional categories:

| | ADMIN | WARFARE | STRATEGIC | OTHER |
|---|---|---|---|---|
| % of users | 86.3% | 24.7% | 24.7% | 11.0% |

## Pilots (131X, 139X)

Population: 8500    Mailed: 425    Sample: 283    Response rate: 66.6%
Sample of officers with more than 3 months in their jobs:    258

****
**COMPUTER USERS**
   Of the 258 officers with more than 3 months in their jobs, 87.6 percent
      (226) are using computers.  The following types of computers are being
      used:

| | USE | How often used | Available, don't use |
|---|---|---|---|
| Microcomputer | 78.7% | Routinely to frequently (4.6) | 13.2% |
| Tactical systems | 40.6% | Frequently (5.2) | 7.0% |
| Minicomputers | 22.4% | Occasionally to routinely (3.5) | 13.0% |
| Technical work-stations | 16.4% | Occasionally to routinely (3.3) | 18.0% |
| Mainframes | 15.7% | Occasionally to routinely (3.3) | 13.3% |
| Integrated real-time systems | 11.1% | Occasionally (3.1) | 8.3% |
| Supercomputers | 2.0% | Almost never (2.2) | 10.5% |

***
   **PERCENTAGE OF OFFICERS DIRECTLY OR INDIRECTLY INVOLVED WITH COMPUTERS:**

| Uses Only | Uses and Supervises | Supervise Only | Average percent of day involved in computers |
|---|---|---|---|
| 25.6% | 62.0% | 5.8% | 23% |

***
**SOFTWARE BEING USED**
   The following types and brands of software are being used by the 226
      computer users:

| Type software | % of 226 using | Top brand used |
|---|---|---|
| Word processing | 88.1% | Wordperfect |
| Graphics | 55.3% | Desktop Publishing |
| Databases | 41.2% | DBASE |
| Spreadsheets | 36.7% | Lotus 123 |
| Utilities | 27.0% | PC Tools |
| Interfaces | 12.8% | Windows |
| Communications | 11.9% | Enable Communications |
| Statistics | 1.3% | SAS |

***
**FUNCTIONAL AREAS**
   The 226 computer users use their computers in the following functional
      categories:

| | ADMIN | WARFARE | STRATEGIC | OTHER |
|---|---|---|---|---|
| % of users | 65.0% | 60.6% | 51.8% | 9.7% |

## Naval Flight Officers (132X, 137X)

Population: 5040    Mailed: 435    Sample: 288    Response rate: 66.2%
Sample of officers with more than 3 months in their jobs:    267

****
**COMPUTER USERS**
   Of the 267 officers with more than 3 months in their jobs, 92.1 percent
      (246) are using computers. The following types of computers are being
      used:

| | USE | How often used | Available, don't use |
|---|---|---|---|
| Microcomputer | 87.3% | Frequently (4.9) | 6.4% |
| Tactical systems | 50.0% | Frequently to almost always (5.5) | 6.4% |
| Technical work-stations | 28.4% | Routinely (3.9) | 16.3% |
| Minicomputers | 25.6% | Occasionally to routinely (3.6) | 13.9% |
| Mainframes | 20.4% | Routinely (3.9) | 13.6% |
| Integrated real-time systems | 14.4% | Routinely (4.0) | 13.6% |
| Supercomputers | 1.9% | Occasionally (2.8) | 13.2% |

***
**PERCENTAGE OF OFFICERS DIRECTLY OR INDIRECTLY INVOLVED WITH COMPUTERS:**

| Uses Only | Uses and Supervises | Supervise Only | Average percent of day involved in computers |
|---|---|---|---|
| 27.3% | 64.8% | 4.1% | 33% |

***
**SOFTWARE BEING USED**
   The following types and brands of software are being used by the 246
      computer users:

| Type software | % of 246 using | Top brand used |
|---|---|---|
| Word processing | 91.1% | Wordperfect |
| Graphics | 60.2% | Harvard Graphics |
| Databases | 45.5% | DBASE |
| Spreadsheets | 39.8% | Lotus 123 |
| Utilities | 36.2% | PC Tools |
| Interfaces | 22.8% | Windows |
| Communications | 14.2% | PROCOMM |
| Statistics | 3.7% | SPSSx |

***
**FUNCTIONAL AREAS**
   The 246 computer users use their computers in the following functional
      categories:

| | ADMIN | WARFARE | STRATEGIC | OTHER |
|---|---|---|---|---|
| % of users | 65.9% | 70.3% | 65.4% | 11.8% |

## Engineering Duty Officers (141X, 144X, 146X)

Population: 883   Mailed: 328   Sample: 213   Response rate: 64.9%
Sample of officers with more than 3 months in their jobs:   192

****
**COMPUTER USERS**
   Of the 192 officers with more than 3 months in their jobs, 93.8 percent
      (180) are using computers.  The following types of computers are being
      used:

| | USE | How often used | Available, don't use |
|---|---|---|---|
| Microcomputer | 91.1% | Frequently to almost always (5.3) | 3.6% |
| Mainframes | 31.6% | Routinely (3.9) | 18.9% |
| Minicomputers | 26.7% | Occasionally to routinely (3.6) | 22.0% |
| Technical work-stations | 24.3% | Occasionally (3.2) | 23.3% |
| Integrated real-time systems | 12.6% | Routinely (3.9) | 12.6% |
| Tactical systems | 12.6% | Routinely (4.2) | 11.5% |
| Supercomputers | 3.2% | Occasionally (2.8) | 12.8% |

***
 **PERCENTAGE OF OFFICERS DIRECTLY OR INDIRECTLY INVOLVED WITH COMPUTERS:**

| Uses Only | Uses and Supervises | Supervise Only | Average percent of day involved in computers |
|---|---|---|---|
| 26.0% | 67.7% | 3.7% | 29% |

***
**SOFTWARE BEING USED**
   The following types and brands of software are being used by the 180
      computer users:

| Type software | % of 180 using | Top brand used |
|---|---|---|
| Word processing | 94.4% | Wordperfect |
| Spreadsheets | 66.7% | Lotus 123 |
| Graphics | 63.3% | Harvard graphics |
| Databases | 58.3% | DBASE |
| Utilities | 41.1% | PC Tools |
| Communications | 36.1% | PROCOMM |
| Interfaces | 28.9% | Windows |
| Statistics | 2.2% | Other statistical packages |

***
**FUNCTIONAL AREAS**
   The 180 computer users use their computers in the following functional
      categories:

| | ADMIN | WARFARE | STRATEGIC | OTHER |
|---|---|---|---|---|
| % of users | 87.2% | 25.6% | 16.7% | 25.5% |

## Aerospace Engineering Duty Officers (150X, 151X)

Population: 270   Mailed: 208   Sample: 107   Response rate: 51.4%
Sample of officers with more than 3 months in their jobs:   95

****
### COMPUTER USERS
Of the 95 officers with more than 3 months in their jobs, 97.9 percent (93) are using computers.  The following types of computers are being used:

| | USE | How often used | Available, don't use |
|---|---|---|---|
| Microcomputer | 97.9% | Frequently to almost always (5.4) | 1.1% |
| Technical work-stations | 36.2% | Occasionally to routinely (3.3) | 19.1% |
| Tactical systems | 34.7% | Routinely to frequently (4.4) | 6.3% |
| Minicomputers | 31.6% | Occasionally (2.9) | 26.3% |
| Mainframes | 27.4% | Occasionally to routinely (3.3) | 20.0% |
| Integrated real-time systems | 8.4% | Occasionally to routinely (3.6) | 7.4% |
| Supercomputers | 4.3% | Almost never to occasionally (2.5) | 11.7% |

***
### PERCENTAGE OF OFFICERS DIRECTLY OR INDIRECTLY INVOLVED WITH COMPUTERS:

| Uses Only | Uses and Supervises | Supervise Only | Average percent of day involved in computers |
|---|---|---|---|
| 21.1% | 76.8% | 2.2% | 31% |

***
### SOFTWARE BEING USED
The following types and brands of software are being used by the 93 computer users:

| Type software | % of 93 using | Top brand used |
|---|---|---|
| Word processing | 95.7% | Wordperfect |
| Graphics | 77.4% | Harvard graphics |
| Spreadsheets | 63.4% | Lotus 123 |
| Databases | 44.1% | DBASE |
| Utilities | 31.2% | Norton Utilities |
| Communications | 29.0% | PROCOMM |
| Interfaces | 22.6% | Windows |
| Statistics | 3.2% | Other statistical packages |

***
### FUNCTIONAL AREAS
The 93 computer users use their computers in the following functional categories:

| | ADMIN | WARFARE | STRATEGIC | OTHER |
|---|---|---|---|---|
| % of users | 79.6% | 43.0% | 26.9% | 31.2% |

## Aerospace Engineering Duty Officer (Aviation Maintenance)(152X)

Population: 585   Mailed: 291   Sample: 204   Response rate: 70.1%
Sample of officers with more than 3 months in their jobs:   181

****
**COMPUTER USERS**
   Of the 181 officers with more than 3 months in their jobs, 92.8 percent
      (167) are using computers.  The following types of computers are being
      used:

| | USE | How often used | Available, don't use |
|---|---|---|---|
| Microcomputer | 89.4% | Routinely to frequently (4.7) | 6.7% |
| Integrated real-time systems | 30.2% | Routinely to frequently (4.5) | 12.3% |
| Minicomputer | 25.4% | Routinely (3.8) | 15.3% |
| Technical work-station | 18.6% | Routinely to frequently (4.3) | 16.9% |
| Mainframes | 18.4% | Routinely (3.8) | 15.6% |
| Tactical systems | 5.1% | Routinely to frequently (4.3) | 9.6% |
| Supercomputers | 1.7% | Occasionally (3.0) | 9.1% |

***

   **PERCENTAGE OF OFFICERS DIRECTLY OR INDIRECTLY INVOLVED WITH COMPUTERS:**

| Uses Only | Uses and Supervises | Supervise Only | Average percent of day involved in computers |
|---|---|---|---|
| 7.8% | 85.0% | 6.1% | 32% |

***
**SOFTWARE BEING USED**
   The following types and brands of software are being used by the 167
      computer users:

| Type software | % of 167 using | Top brand used |
|---|---|---|
| Word processing | 94.0% | Wordperfect |
| Graphics | 64.1% | Harvard Graphics |
| Spreadsheets | 62.9% | Lotus 123 |
| Databases | 62.3% | DBASE |
| Utilities | 43.7% | PC Tools |
| Interfaces | 19.8% | Windows |
| Communications | 19.2% | PROCOMM |
| Statistics | 3.0% | SAS |

***
**FUNCTIONAL AREAS**
   The 167 computer users use their computers in the following functional
      categories:

| | ADMIN | WARFARE | STRATEGIC | OTHER |
|---|---|---|---|---|
| % of users | 89.8% | 7.8% | 11.4% | 3.0% |

## Aviation Duty Officer (154X)

Population: 184   Mailed: 171   Sample: 73   Response rate: 42.7%
Sample of officers with more than 3 months in their jobs:   66

****
**COMPUTER USERS**

Of the 66 officers with more than 3 months in their jobs, 79.7 percent (51) are using computers.  The following types of computers are being used:

| | Use | How often used | Available, don't use |
|---|---|---|---|
| Microcomputer | 74.2% | Routinely (4.2) | 15.2% |
| Tactical systems | 21.9% | Routinely to frequently (4.6) | 4.7% |
| Minicomputer | 10.9% | Occasionally (3.1) | 12.5% |
| Mainframes | 4.6% | Occasionally to routinely (3.7) | 12.3% |
| Integrated real-time systems | 3.1% | Routinely (4.0) | 9.2% |
| Technical work-stations | 3.1% | Occasionally to routinely (3.5) | 16.9% |
| Supercomputers | 0.0% | | 7.7% |

***

**PERCENTAGE OF OFFICERS DIRECTLY OR INDIRECTLY INVOLVED WITH COMPUTERS:**

| Uses Only | Uses and Supervises | Supervise Only | Average percent of day involved in computers |
|---|---|---|---|
| 15.7% | 64.1% | 15.7% | 17% |

***

**SOFTWARE BEING USED**

The following types and brands of software are being used by the 51 computer users:

| Type software | % of 51 using | Top brand used |
|---|---|---|
| Word processing | 88.2% | Wordperfect |
| Databases | 47.1% | DBASE |
| Graphics | 41.2% | Desktop Publishing Packages |
| Spreadsheets | 37.3% | Lotus 123 |
| Utilities | 33.3% | PC Tools |
| Communications | 21.6% | PROCOMM |
| Interfaces | 5.9% | Windows |
| Statistics | 0.0% | |

***

**FUNCTIONAL AREAS**

The 51 computer users use their computers in the following functional categories:

| | ADMIN | WARFARE | STRATEGIC | OTHER |
|---|---|---|---|---|
| % of users | 68.6% | 11.8% | 11.8% | 11.8% |

## Special Duty Officers (Cryptology)(161X)

Population: 706    Mailed: 306    Sample: 172    Response rate: 56.2%
Sample of officers with more than 3 months in their jobs:  143

****
## COMPUTER USERS
Of the 143 officers with more than 3 months in their jobs, 95.1 percent
(136) are using computers.  The following types of computers are being
used:

| | USE | How often used | Available, don't use |
|---|---|---|---|
| Microcomputer | 93.7% | Frequently to almost always (5.5) | 3.5% |
| Technical work-stations | 40.8% | Routinely to frequently (4.3) | 18.3% |
| Minicomputer | 37.1% | Routinely to frequently (4.4) | 18.9% |
| Mainframes | 32.2% | Frequently (4.9) | 21.0% |
| Integrated real-time systems | 21.8% | Routinely (3.8) | 10.6% |
| Tactical systems stations | 17.7% | Occasionally to routinely (3.7) | 9.9% |
| Supercomputers | 2.9% | Occasionally (3.0) | 13.6% |

***

**PERCENTAGE OF OFFICERS DIRECTLY OR INDIRECTLY INVOLVED WITH COMPUTERS:**

| Uses Only | Uses and Supervises | Supervise Only | Average percent of day involved in computers |
|---|---|---|---|
| 11.2% | 83.2% | 4.2% | 48% |

***
## SOFTWARE BEING USED
The following types and brands of software are being used by the 136
computer users:

| Type software | % of 136 using | Top brand used |
|---|---|---|
| Word processing | 96.3% | Office Writer |
| Databases | 55.1% | DBASE |
| Graphics | 44.1% | Desktop Publishing Packages |
| Utilities | 40.4% | Norton Utilities |
| Spreadsheets | 30.9% | Lotus 123 |
| Communications | 15.4% | Other Communications Packages |
| Interfaces | 13.2% | Windows |
| Statistics | 1.5% | SAS |

***
## FUNCTIONAL AREAS
The 136 computer users use their computers in the following functional
categories:

| | ADMIN | WARFARE | STRATEGIC | OTHER |
|---|---|---|---|---|
| % of users | 78.7% | 47.1% | 79.4% | 12.5% |

## Special Duty Officers (Intelligence) (163X)

Population: 1174   Mailed: 339   Sample: 211   Response rate: 62.2%
Sample of officers with more than 3 months in their jobs: 185

****
**COMPUTER USERS**
  Of the 185 officers with more than 3 months in their jobs, 97.3 percent
    (180) are using computers.  The following types of computers are being
    used:

| | USE | How often used | Available, don't use |
|---|---|---|---|
| Microcomputer | 93.0% | Frequently to almost always (5.3) | 3.2% |
| Technical work-stations | 53.0% | Routinely to frequently (4.6) | 8.3% |
| Integrated real-time systems | 43.7% | Routinely to frequently (4.6) | 5.5% |
| Minicomputer | 33.9% | Routinely to frequently (4.4) | 10.4% |
| Mainframes | 28.3% | Routinely to frequently (4.5) | 13.0% |
| Tactical systems | 14.2% | Routinely (3.9) | 6.0% |
| Supercomputers | 1.6% | Routinely to frequently (4.7) | 8.2% |

***
  **PERCENTAGE OF OFFICERS DIRECTLY OR INDIRECTLY INVOLVED WITH COMPUTERS:**

| Uses Only | Uses and Supervises | Supervise Only | Average percent of day involved in computers |
|---|---|---|---|
| 25.9% | 71.4% | 2.7% | 42% |

***
**SOFTWARE BEING USED**
  The following types and brands of software are being used by the 180
    computer users:

| Type software | % of 180 using | Top brand used |
|---|---|---|
| Word processing | 95.0% | Wordperfect |
| Graphics | 65.0% | Harvard Graphics |
| Databases | 45.0% | DBASE |
| Utilities | 27.8% | Norton Utilities |
| Spreadsheets | 23.3% | Lotus 123 |
| Interfaces | 18.9% | Windows |
| Communications | 9.4% | PROCOMM |
| Statistics | .6% | SPSSx |

***
**FUNCTIONAL AREAS**
  The 180 computer users use their computers in the following functional
    categories:

| | ADMIN | WARFARE | STRATEGIC | OTHER |
|---|---|---|---|---|
| % of users | 65.0% | 57.2% | 88.3% | 8.3% |

## Special Duty Officers (Public Affairs) (165X)

Population: 195    Mailed: 176    Sample: 92    Response rate: 52.2%
Sample of officers with more than 3 months in their jobs: 83

****
**COMPUTER USERS**
    Of the 83 officers with more than 3 months in their jobs, 94.0 percent
    (78) are using computers.  The following types of computers are being
    used:

| | USE | How often used | Available, don't use |
|---|---|---|---|
| Microcomputer | 88.0% | Almost always (5.9) | 6.0% |
| Technical work-stations | 32.9% | Routinely (4.2) | 19.5% |
| Minicomputer | 13.4% | Routinely (3.9) | 14.6% |
| Mainframes | 9.8% | Routinely (3.9) | 13.4% |
| Integrated real-time systems | 7.4% | Occasionally (2.8) | 13.6% |
| Tactical systems | 1.2% | Occasionally (3.0) | 12.2% |
| Supercomputers | 1.2% | Occasionally (3.0) | 12.2% |

***
  **PERCENTAGE OF OFFICERS DIRECTLY OR INDIRECTLY INVOLVED WITH COMPUTERS:**

| Uses Only | Uses and Supervises | Supervise Only | Average percent of day involved in computers |
|---|---|---|---|
| 10.8% | 83.1% | 4.8% | 33% |

***
**SOFTWARE BEING USED**
    The following types and brands of software are being used by the 78
    computer users:

| Type software | % of 78 using | Top brand used |
|---|---|---|
| Word processing | 100.0% | Wordperfect |
| Graphics | 51.3% | Desktop Publishing Packages |
| Databases | 30.8% | DBASE |
| Interfaces | 26.9% | Windows |
| Communications | 25.6% | PROCOMM |
| Utilities | 21.8% | PC Tools |
| Spreadsheets | 19.2% | Other Spreadsheet Packages |
| Statistics | 1.3% | SPSSx |

***
**FUNCTIONAL AREAS**
    The 78 computer users use their computers in the following functional
        categories:

| | ADMIN | WARFARE | STRATEGIC | OTHER |
|---|---|---|---|---|
| % of users | 85.9% | 9.0% | 10.3% | 10.3% |

## Special Duty Officers (Oceanography) (180X)

Population: 390   Mailed: 271   Sample: 201   Response rate: 74.2%
Sample of officers with more than 3 months in their jobs: 180

****
**COMPUTER USERS**
Of the 180 officers with more than 3 months in their jobs, 97.8 percent (175) are using computers. The following types of computers are being used:

|  | USE | How often used | Available, don't use |
|---|---|---|---|
| Microcomputer | 97.2% | Frequently to almost always (5.5) | 2.2% |
| Technical work-stations | 48.9% | Routinely to frequently (4.4) | 21.0% |
| Minicomputer | 39.0% | Routinely (4.1) | 22.0% |
| Mainframes | 32.8% | Routinely (4.1) | 17.5% |
| Integrated real-time systems | 22.6% | Routinely to frequently (4.4) | 7.9% |
| Tactical systems | 21.5% | Routinely (4.1) | 6.2% |
| Supercomputers | 14.8% | Routinely (4.1) | 14.8% |

***
**PERCENTAGE OF OFFICERS DIRECTLY OR INDIRECTLY INVOLVED WITH COMPUTERS:**

| Uses Only | Uses and Supervises | Supervise Only | Average percent of day involved in computers |
|---|---|---|---|
| 20.1% | 77.7% | 1.7% | 51% |

***
**SOFTWARE BEING USED**
The following types and brands of software are being used by the 175 computer users:

| Type software | % of 175 using | Top brand used |
|---|---|---|
| Word processing | 96.6% | Wordstar |
| Graphics | 61.7% | Harvard Graphics |
| Databases | 50.3% | DBASE |
| Communications | 45.7% | PROCOMM |
| Utilities | 36.6% | Norton Utilities |
| Spreadsheets | 35.4% | Lotus 123 |
| Interfaces | 25.1% | Windows |
| Statistics | .6% | Other Statistical Packages |

***
**FUNCTIONAL AREAS**
The 175 computer users use their computers in the following functional categories:

|  | ADMIN | WARFARE | STRATEGIC | OTHER |
|---|---|---|---|---|
| % of users | 70.9% | 53.1% | 84.6% | 24.0% |

## Medical Corps Officers (210X)

Population: 3686    Mailed:  385   Sample: 121    Response rate:  31.4%
Sample of officers with more than 3 months in their jobs: 108

****
COMPUTER USERS
    Of the 108 officers with more than 3 months in their jobs, 69.5 percent
        (73) are using computers.  The following types of computers are being
        used:

| | USE | How often used | Available, don't use |
|---|---|---|---|
| Microcomputer | 60.4% | Routinely to frequently (4.3) | 15.1% |
| Mainframes | 11.9% | Routinely (4.0) | 14.9% |
| Tactical systems | 10.8% | Occasionally to routinely (3.6) | 6.9% |
| Technical work-stations | 9.8% | Occasionally to routinely (3.7) | 17.6% |
| Minicomputer | 8.7% | Routinely (4.1) | 19.4% |
| Integrated real-time systems | 7.8% | Occasionally to routinely (3.5) | 7.8% |
| Supercomputers | 1.0% | Routinely (4.0) | 8.7% |

***
    PERCENTAGE OF OFFICERS DIRECTLY OR INDIRECTLY INVOLVED WITH COMPUTERS:

| Uses Only | Uses and Supervises | Supervise Only | Average percent of day involved in computers |
|---|---|---|---|
| 18.1% | 51.4% | 14.3% | 16% |

***
SOFTWARE BEING USED
    The following types and brands of software are being used by the 73
        computer users:

| Type software | % of 73 using | Top brand used |
|---|---|---|
| Word processing | 79.5% | Wordperfect |
| Graphics | 52.1% | Desktop Publishing Packages |
| Databases | 46.6% | DBASE |
| Utilities | 31.5% | PC Tools |
| Spreadsheets | 27.4% | Other Spreadsheet Packages |
| Communications | 19.2% | PROCOMM |
| Interfaces | 16.4% | Windows |
| Statistics | 9.6% | SAS |

***
FUNCTIONAL AREAS
    The 73 computer users use their computers in the following functional
        categories:

| | ADMIN | WARFARE | STRATEGIC | OTHER |
|---|---|---|---|---|
| % of users | 83.6% | 5.5% | 1.4% | 19.2% |

## Dental Corps Officers (220X)

Population: 1604   Mailed: 355   Sample: 241   Response rate: 67.9%
Sample of officers with more than 3 months in their jobs:   225

\*\*\*\*
**COMPUTER USERS**
Of the 225 officers with more than 3 months in their jobs, 71.1 percent (160) are using computers.  The following types of computers are being used:

| | USE | How often used | Available, don't use |
|---|---|---|---|
| Microcomputer | 68.3% | Routinely (4.2) | 12.9% |
| Minicomputer | 8.5% | Routinely (3.8) | 12.1% |
| Technical work-stations | 6.3% | Occasionally to routinely (3.4) | 12.6% |
| Integrated real-systems | 4.9% | Occasionally (3.1) | 8.5% |
| Tactical systems | 4.0% | Routinely to frequently (4.4) | 10.3% |
| Mainframes | 3.1% | Routinely to frequently (4.3) | 11.7% |
| Supercomputers | .9% | Almost never (2.0) | 7.6% |

\*\*\*
**PERCENTAGE OF OFFICERS DIRECTLY OR INDIRECTLY INVOLVED WITH COMPUTERS:**

| Uses Only | Uses and Supervises | Supervise Only | Average percent of day involved in computers |
|---|---|---|---|
| 25.3% | 45.8% | 8.5% | 13% |

\*\*\*
**SOFTWARE BEING USED**
The following types and brands of software are being used by the 160 computer users:

| Type software | % of 160 using | Top brand used |
|---|---|---|
| Word processing | 92.5% | Wordperfect |
| Databases | 60.0% | DBASE |
| Graphics | 48.7% | Desktop Publishing Packages |
| Spreadsheets | 30.0% | Enable Spreadsheet |
| Utilities | 25.6% | PC Tools |
| Communications | 15.0% | PROCOMM |
| Interfaces | 15.0% | Windows |
| Statistics | 1.9% | Other Statistical Packages |

\*\*\*
**FUNCTIONAL AREAS**
The 160 computer users use their computers in the following functional categories:

| | ADMIN | WARFARE | STRATEGIC | OTHER |
|---|---|---|---|---|
| % of users | 86.9% | .6% | 1.9% | 6.2% |

## Medical Service Corps Officers (230X)

Population: 2582    Mailed: 385    Sample: 263    Response rate: 68.3%
Sample of officers with more than 3 months in their jobs:    242

****
COMPUTER USERS
Of the 242 officers with more than 3 months in their jobs, 88.8 percent
(215) are using computers. The following types of computers are being
used:

| | USE | How often used | Available, don't use |
|---|---|---|---|
| Microcomputer | 87.1% | Frequently (5.2) | 4.6% |
| Technical work-stations | 22.9% | Occasionally to routinely (3.4) | 15.4% |
| Minicomputer | 22.7% | Routinely (3.9) | 12.8% |
| Mainframes | 22.1% | Routinely to frequently (4.3) | 14.2% |
| Tactical systems | 9.9% | Routinely (4.2) | 9.9% |
| Integrated real-time systems | 5.0% | Routinely to frequently (4.3) | 10.1% |
| Supercomputers | .8% | Routinely to frequently (4.5) | 9.9% |

***

PERCENTAGE OF OFFICERS DIRECTLY OR INDIRECTLY INVOLVED WITH COMPUTERS:

| Uses Only | Uses and Supervises | Supervise Only | Average percent of day involved in computers |
|---|---|---|---|
| 11.9% | 76.9% | 6.2% | 36% |

***

SOFTWARE BEING USED
The following types and brands of software are being used by the 215
computer users:

| Type software | % of 215 using | Top brand used |
|---|---|---|
| Word processing | 91.2% | Wordperfect |
| Databases | 69.8% | DBASE |
| Graphics | 64.2% | Harvard Graphics |
| Spreadsheets | 60.9% | Lotus 123 |
| Utilities | 39.1% | PC Tools |
| Communications | 38.1% | PROCOMM |
| Interfaces | 19.1% | Windows |
| Statistics | 11.6% | SPSSx |

***

FUNCTIONAL AREAS
The 215 computer users use their computers in the following functional
categories:

| | ADMIN | WARFARE | STRATEGIC | OTHER |
|---|---|---|---|---|
| % of users | 91.2% | 4.6% | 3.3% | 14.9% |

## Judge Advocate General Corps Officers (250X)

Population: 907    Mailed: 332    Sample: 240    Response rate: 72.3%
Sample of officers with more than 3 months in their jobs:    201

****

### COMPUTER USERS

Of the 201 officers with more than 3 months in their jobs, 85.9 percent (170) are using computers.  The following types of computers are being used:

| | USE | How often used | Available, don't use |
|---|---|---|---|
| Microcomputer | 81.6% | Frequently (5.2) | 7.0% |
| Minicomputer | 9.1% | Routinely (3.8) | 11.7% |
| Technical work-stations | 7.1% | Occasionally to routinely (3.5) | 12.6% |
| Mainframes | 6.5% | Routinely (4.1) | 9.5% |
| Integrated real-time systems | 3.6% | Occasionally to routinely (3.3) | 8.1% |
| Tactical systems | 1.5% | Routinely to frequently (4.7) | 8.7% |
| Supercomputers | .5% | Almost never (2.0) | 6.5% |

***

### PERCENTAGE OF OFFICERS DIRECTLY OR INDIRECTLY INVOLVED WITH COMPUTERS:

| Uses Only | Uses and Supervises | Supervise Only | Average percent of day involved in computers |
|---|---|---|---|
| 25.3% | 60.6% | 9.6% | 29% |

***

### SOFTWARE BEING USED

The following types and brands of software are being used by the 170 computer users:

| Type software | % of 170 using | Top brand used |
|---|---|---|
| Word processing | 98.2% | Wordperfect |
| Databases | 34.7% | RBASE |
| Graphics | 30.6% | Desktop Publishing Packages |
| Communications | 27.6% | PROCOMM |
| Utilities | 23.5% | Norton Utilities |
| Spreadsheets | 11.8% | Lotus 123 |
| Interfaces | 4.7% | Windows |
| Statistics | 0.0% | |

***

### FUNCTIONAL AREAS

The 170 computer users use their computers in the following functional categories:

| | ADMIN | WARFARE | STRATEGIC | OTHER |
|---|---|---|---|---|
| % of users | 97.6% | 2.4% | 3.5% | 1.2% |

## Nurse Corps Officers (290X)

Population: 2782   Mailed: 399   Sample: 193   Response rate: 48.4%
Sample of officers with more than 3 months in their jobs:   175

****
**COMPUTER USERS**
Of the 175 officers with more than 3 months in their jobs, 65.7 percent
(116) are using computers.  The following types of computers are being
used:

| | USE | How often used | Available, don't use |
|---|---|---|---|
| Microcomputer | 57.8% | Routinely to frequently (4.3) | 16.8% |
| Tactical systems | 14.5% | Frequently (5.2) | 8.1% |
| Minicomputer | 11.8% | Occasionally to routinely (3.5) | 11.8% |
| Technical work-stations | 11.0% | Occasionally (3.2) | 13.4% |
| Mainframes | 5.2% | Routinely to frequently (4.7) | 12.6% |
| Integrated real-time systems | 2.3% | Occasionally to routinely (3.3) | 5.8% |
| Supercomputers | .6% | Almost never (2.0) | 7.5% |

***
**PERCENTAGE OF OFFICERS DIRECTLY OR INDIRECTLY INVOLVED WITH COMPUTERS:**

| Uses Only | Uses and Supervises | Supervise Only | Average percent of day involved in computers |
|---|---|---|---|
| 20.7% | 45.0% | 13.9% | 19% |

***
**SOFTWARE BEING USED**
The following types and brands of software are being used by the 116
computer users:

| Type software | % of 116 using | Top brand used |
|---|---|---|
| Word processing | 75.0% | Wordperfect |
| Databases | 45.7% | DBASE |
| Graphics | 44.0% | Desktop Publishing Packages |
| Spreadsheets | 32.8% | Enable Spreadsheet |
| Utilities | 18.1% | PC Tools |
| Communications | 12.9% | Enable Communications |
| Interfaces | 12.9% | Windows |
| Statistics | 3.4% | SPSSx/Other Statistical Packages |

***
**FUNCTIONAL AREAS**
The 116 computer users use their computers in the following functional
categories:

| | ADMIN | WARFARE | STRATEGIC | OTHER |
|---|---|---|---|---|
| % of users | 75.9% | 0% | 3.4% | 7.8% |

## Supply Corps Officers (310X)

Population: 3434   Mailed: 394   Sample: 293   Response rate: 74.4%
Sample of officers with more than 3 months in their jobs:   258

****
COMPUTER USERS
   Of the 258 officers with more than 3 months in their jobs, 96.5 percent
      (248) are using computers.  The following types of computers are being
      used:

| | USE | How often used | Available, don't use |
|---|---|---|---|
| Microcomputer | 94.9% | Frequently to almost always (5.3) | 2.3% |
| Integrated real-time systems | 44.7% | Frequently (5.2) | 5.9% |
| Mainframes | 37.8% | Routinely to frequently (4.4) | 11.0% |
| Minicomputer | 28.2% | Routinely (4.1) | 11.9% |
| Technical work-stations | 27.9% | Occasionally to routinely (3.6) | 14.3% |
| Tactical systems | 7.1% | Occasionally to routinely (3.4) | 8.7% |
| Supercomputers | 2.4% | Occasionally to routinely (3.7) | 7.5% |

***

   PERCENTAGE OF OFFICERS DIRECTLY OR INDIRECTLY INVOLVED WITH COMPUTERS:

| Uses Only | Uses and Supervises | Supervise Only | Average percent of day involved in computers |
|---|---|---|---|
| 10.5% | 86.0% | 2.4% | 44% |

***
SOFTWARE BEING USED
   The following types and brands of software are being used by the 248
      computer users:

| Type software | % of 248 using | Top brand used |
|---|---|---|
| Word processing | 93.5% | Wordperfect |
| Spreadsheets | 73.4% | Lotus 123 |
| Databases | 64.9% | DBASE |
| Graphics | 62.1% | Harvard graphics |
| Utilities | 30.6% | PC Tools |
| Interfaces | 23.8% | Windows |
| Communications | 16.5% | PROCOMM |
| Statistics | 2.4% | SPSSx |

***
FUNCTIONAL AREAS
   The 248 computer users use their computers in the following functional
      categories:

| | ADMIN | WARFARE | STRATEGIC | OTHER |
|---|---|---|---|---|
| % of users | 97.6% | 11.3% | 8.5% | 4.4% |

## Chaplain Corps Officers (410X)

Population: 1120    Mailed: 352    Sample: 199    Response rate: 56.5%
Sample of officers with more than 3 months in their jobs:    178

****
**COMPUTER USERS**
Of the 178 officers with more than 3 months in their jobs, 74.9 percent
(131) are using computers.  The following types of computers are being
used:

| | USE | How often used | Available, don't use |
|---|---|---|---|
| Microcomputer | 72.9% | Frequently (4.8) | 9.6% |
| Technical work-stations | 20.7% | Occasionally to routinely (3.7) | 14.9% |
| Minicomputers | 10.9% | Occasionally to routinely (3.4) | 16.1% |
| Integrated real-time systems | 8.6% | Occasionally to routinely (3.5) | 8.6% |
| Mainframes | 5.2% | Occasionally (2.8) | 13.2% |
| Supercomputers | 1.1% | Almost never (2.0) | 9.7% |
| Tactical systems | .6% | Occasionally (3.0) | 8.0% |

***

**PERCENTAGE OF OFFICERS DIRECTLY OR INDIRECTLY INVOLVED WITH COMPUTERS:**

| Uses Only | Uses and Supervises | Supervise Only | Average percent of day involved in computers |
|---|---|---|---|
| 11.5% | 63.4% | 16.0% | 25% |

***
**SOFTWARE BEING USED**
The following types and brands of software are being used by the 131
computer users:

| Type software | % of 131 using | Top brand used |
|---|---|---|
| Word processing | 92.4% | Wordstar |
| Graphics | 64.9% | Desktop Publishing |
| Databases | 48.1% | DBASE |
| Spreadsheets | 48.1% | Enable spreadsheet |
| Utilities | 36.6% | PC Tools |
| Interfaces | 24.4% | Windows |
| Communications | 10.7% | Enable Communications |
| Statistics | .8% | SPSSx/SAS/Other statistical packages |

***
**FUNCTIONAL AREAS**
The 131 computer users use their computers in the following functional
categories:

| | ADMIN | WARFARE | STRATEGIC | OTHER |
|---|---|---|---|---|
| % of users | 97.7% | 0 | 6.1% | 13.8% |

## Civil Engineering Corps (510X)

Population: 1377   Mailed: 348   Sample: 267   Response rate: 76.7%
Sample of officers with more than 3 months in their jobs:   240

****
COMPUTER USERS
   Of the 240 officers with more than 3 months in their jobs, 96.3 percent
      (231) are using computers.  The following types of computers are being
      used:

|  | USE | How often used | Available, don't use |
|---|---|---|---|
| Microcomputer | 95.8% | Frequently (5.1) | 3.3% |
| Technical work-stations | 21.5% | Occasionally (3.0) | 15.6% |
| Minicomputers | 19.7% | Occasionally (3.2) | 13.4% |
| Mainframes | 10.4% | Occasionally to routinely (3.3) | 14.2% |
| Integrated real-time systems | 2.9% | Routinely to frequently (4.4) | 7.1% |
| Tactical systems | 1.2% | Almost never (2.0) | 5.0% |
| Supercomputers | .4% | Almost never (2.0) | 8.3% |

***

   PERCENTAGE OF OFFICERS DIRECTLY OR INDIRECTLY INVOLVED WITH COMPUTERS:

| Uses Only | Uses and Supervises | Supervise Only | Average percent of day involved in computers |
|---|---|---|---|
| 23.8% | 72.5% | 3.3% | 27% |

***
SOFTWARE BEING USED
   The following types and brands of software are being used by the 231
      computer users:

| Type software | % of 231 using | Top brand used |
|---|---|---|
| Word processing | 96.5% | Wordperfect |
| Spreadsheets | 84.8% | Lotus 123 |
| Graphics | 69.3% | Harvard graphics |
| Databases | 67.1% | DBASE |
| Utilities | 36.8% | Norton Utilities |
| Interfaces | 25.1% | Windows |
| Communications | 21.6% | PROCOMM |
| Statistics | .9% | Other statistical packages |

***
FUNCTIONAL AREAS
   The 231 computer users use their computers in the following functional
      categories:

|  | ADMIN | WARFARE | STRATEGIC | OTHER |
|---|---|---|---|---|
| % of users | 93.5% | 5.2% | 3.5% | 12.6% |

## Limited Duty Officer-Line (Surface) (61XX)

Population: 1379   Mailed: 365   Sample: 235   Response rate: 64.4%
Sample of officers with more than 3 months in their jobs:   211

****
COMPUTER USERS
   Of the 211 officers with more than 3 months in their jobs, 90.9 ercent
      (190) are using computers.  The following types of computers are being
      used:

| | USE | How often used | Available, don't use |
|---|---|---|---|
| Microcomputer | 86.2% | Frequently (4.9) | 7.1% |
| Integrated real-time systems | 40.9% | Routinely to frequently (4.4) | 9.1% |
| Tactical systems | 30.3% | Routinely (4.1) | 10.1% |
| Minicomputers | 26.9% | Routinely (4.0) | 13.5% |
| Mainframes | 22.7% | Routinely (4.0) | 13.0% |
| Technical work-stations | 22.3% | Occasionally to routinely (3.4) | 14.6% |
| Supercomputers | 2.9% | Occasionally (2.8) | 9.7% |

***

   PERCENTAGE OF OFFICERS DIRECTLY OR INDIRECTLY INVOLVED WITH COMPUTERS:

| Uses Only | Uses and Supervises | Supervise Only | Average percent of day involved in computers |
|---|---|---|---|
| 6.2% | 84.7% | 6.2% | 36% |

***
SOFTWARE BEING USED
   The following types and brands of software are being used by the 190
      computer users:

| Type software | % of 190 using | Top brand used |
|---|---|---|
| Word processing | 90.0% | Wordperfect |
| Databases | 60.0% | DBASE 123 |
| Graphics | 48.4% | Desktop Publishing |
| Utilities | 42.6% | PC Tools |
| Spreadsheets | 41.6% | Lotus 123 |
| Interfaces | 25.3% | Windows |
| Communications | 22.6% | PROCOMM |
| Statistics | 2.6% | SPSSx/SAS |

***
FUNCTIONAL AREAS
   The 190 computer users use their computers in the following functional
      categories:

| | ADMIN | WARFARE | STRATEGIC | OTHER |
|---|---|---|---|---|
| % of users | 88.4% | 36.3% | 40.0% | 6.3% |

## Limited Duty Officer-Line (Submarine) (62XX)

Population: 537    Mailed: 297    Sample: 197    Response rate: 66.3%
Sample of officers with more than 3 months in their jobs:    182

****
## COMPUTER USERS
Of the 182 officers with more than 3 months in their jobs, 86.6 percent (155) are using computers. The following types of computers are being used:

| | USE | How often used | Available, don't use |
|---|---|---|---|
| Microcomputer | 81.6% | Frequently (4.8) | 11.2% |
| Tactical systems | 30.7% | Routinely (3.8) | 8.4% |
| Integrated real-time systems | 25.7% | Occasionally to routinely (3.3) | 10.6% |
| Minicomputers | 20.1% | Routinely (3.9) | 16.2% |
| Technical work-stations | 20.0% | Occasionally (3.1) | 15.4% |
| Mainframes | 17.9% | Occasionally to routinely (3.7) | 13.4% |
| Supercomputers | 2.3% | Occasionally to routinely (3.3) | 10.2% |

***
## PERCENTAGE OF OFFICERS DIRECTLY OR INDIRECTLY INVOLVED WITH COMPUTERS:

| Uses Only | Uses and Supervises | Supervise Only | Average percent of day involved in computers |
|---|---|---|---|
| 7.8% | 78.8% | 11.7% | 26% |

***
## SOFTWARE BEING USED
The following types and brands of software are being used by the 155 computer users:

| Type software | % of 155 using | Top brand used |
|---|---|---|
| Word processing | 92.3% | Wordperfect |
| Databases | 54.2% | DBASE |
| Graphics | 45.2% | Desktop Publishing |
| Utilities | 41.9% | PC Tools |
| Spreadsheets | 38.7% | Lotus 123 |
| Communications | 18.7% | PROCOMM |
| Interfaces | 14.8% | Windows |
| Statistics | - | - |

***
## FUNCTIONAL AREAS
The 155 computer users use their computers in the following functional categories:

| | ADMIN | WARFARE | STRATEGIC | OTHER |
|---|---|---|---|---|
| % of users | 74.8% | 30.3% | 35.4% | 7.7% |

## Limited Duty Officer-Line (Aviation) (63XX)

Population: 944   Mailed: 332   Sample: 213   Response rate: 64.1%
Sample of officers with more than 3 months in their jobs:   198

\*\*\*\*
COMPUTER USERS
   Of the 198 officers with more than 3 months in their jobs, 78.3 percent
      (155) are using computers.  The following types of computers are being
      used:

| | USE | How often used | Available, don't use |
|---|---|---|---|
| Microcomputer | 74.7% | Routinely to frequently (4.4) | 17.2% |
| Minicomputers | 18.8% | Occasionally to routinely (3.4) | 17.3% |
| Technical work-stations | 18.1% | Occasionally (3.2) | 16.6% |
| Integrated real-time systems | 17.3% | Occasionally to routinely (3.7) | 10.2% |
| Mainframes | 11.7% | Occasionally to routinely (3.4) | 17.9% |
| Tactical systems | 11.2% | Routinely (4.1) | 9.2% |
| Supercomputers | 2.6% | Occasionally to routinely (3.6) | 11.7% |

\*\*\*

PERCENTAGE OF OFFICERS DIRECTLY OR INDIRECTLY INVOLVED WITH COMPUTERS:

| Uses Only | Uses and Supervises | Supervise Only | Average percent of day involved in computers |
|---|---|---|---|
| 4.5 | 73.7% | 19.7% | 27% |

\*\*\*

SOFTWARE BEING USED
   The following types and brands of software are being used by the 155
      computer users:

| Type software | % of 155 using | Top brand used |
|---|---|---|
| Word processing | 92.3% | Wordperfect |
| Databases | 62.2% | DBASE |
| Spreadsheets | 56.8% | Lotus 123 |
| Graphics | 54.2% | Harvard graphics/Enable/Desktop |
| Utilities | 32.3% | PC Tools |
| Interfaces | 22.6% | Windows |
| Communications | 12.3% | Enable Communications |
| Statistics | - | - |

\*\*\*

FUNCTIONAL AREAS
   The 155 computer users use their computers in the following functional
      categories:

| | ADMIN | WARFARE | STRATEGIC | OTHER |
|---|---|---|---|---|
| % of users | 90.3% | 19.4% | 18.1% | 3.9% |

## Limited Duty Officer - Line (General) (64XX)

Population: 1119   Mailed: 351   Sample: 222   Response rate: 63.2%
Sample of officers with more than 3 months in their jobs:   201

****
## COMPUTER USERS
Of the 201 officers with more than 3 months in their jobs, 87.9 percent (175) are using computers.  The following types of computers are being used:

| | USE | How often used | Available, don't use |
|---|---|---|---|
| Microcomputer | 84.4% | Frequently (4.9) | 10.1% |
| Integrated real-time systems | 30.3% | Routinely (3.8) | 12.6% |
| Technical work-stations | 24.7% | Occasionally to routinely (3.5) | 21.2% |
| Minicomputer | 23.5% | Occasionally to routinely (3.5) | 19.9% |
| Mainframes | 21.7% | Routinely to frequently (4.3) | 18.7% |
| Tactical systems | 9.6% | Occasionally (2.8) | 10.7% |
| Supercomputers | 3.0% | Occasionally to routinely (3.7) | 12.2% |

***
## PERCENTAGE OF OFFICERS DIRECTLY OR INDIRECTLY INVOLVED WITH COMPUTERS:

| Uses Only | Uses and Supervises | Supervise Only | Average percent of day involved in computers |
|---|---|---|---|
| 13.1% | 74.9% | 9.0% | 35% |

***
## SOFTWARE BEING USED
The following types and brands of software are being used by the 175 computer users:

| Type software | % of 175 using | Top brand used |
|---|---|---|
| Word processing | 90.9% | Wordperfect |
| Databases | 60.0% | DBASE |
| Graphics | 50.8% | Harvard Graphics |
| Spreadsheets | 44.0% | Lotus 123 |
| Utilities | 38.3% | PC Tools |
| Interfaces | 20.0% | Windows |
| Communications | 18.9% | PROCOMM |
| Statistics | 0.0% | |

***
## FUNCTIONAL AREAS
The 175 computer users use their computers in the following functional categories:

| | ADMIN | WARFARE | STRATEGIC | OTHER |
|---|---|---|---|---|
| % of users | 85.7% | 15.4% | 21.1% | 6.3% |

### Limited Duty Officer - Staff Corps (65XX)

Population: 275    Mailed: 218    Sample: 123    Response rate: 56.4%
Sample of officers with more than 3 months in their jobs:   119

****
**COMPUTER USERS**
   Of the 119 officers with more than 3 months in their jobs, 94.1 percent
(112) are using computers.  The following types of computers are being
used:

| | USE | How often used | Available, don't use |
|---|---|---|---|
| Microcomputer | 92.4% | Frequently (5.0) | 2.5% |
| Integrated real-time systems | 42.2% | Routinely to frequently (4.7) | 4.3% |
| Technical work-stations | 32.2% | Occasionally to routinely (3.3) | 12.2% |
| Minicomputer | 31.6% | Routinely to frequently (4.4) | 13.7% |
| Mainframes | 29.9% | Routinely (4.2) | 12.8% |
| Supercomputers | 1.7% | Frequently (5.0) | 9.4% |
| Tactical systems | .9% | Almost never (2.0) | 6.8% |

***
**PERCENTAGE OF OFFICERS DIRECTLY OR INDIRECTLY INVOLVED WITH COMPUTERS:**

| Uses Only | Uses and Supervises | Supervise Only | Average percent of day involved in computers |
|---|---|---|---|
| 8.4% | 85.7% | 5.1% | 41% |

***
**SOFTWARE BEING USED**
   The following types and brands of software are being used by the 112
computer users:

| Type software | % of 112 using | Top brand used |
|---|---|---|
| Word processing | 92.9% | Wordperfect |
| Databases | 63.4% | DBASE |
| Spreadsheets | 56.3% | Lotus 123 |
| Graphics | 53.6% | Desktop Publishing Packages |
| Utilities | 33.0% | PC Tools |
| Communications | 20.5% | PROCOMM |
| Interfaces | 17.0% | Windows |
| Statistics | .9% | SPSSx/SAS |

***
**FUNCTIONAL AREAS**
   The 112 computer users use their computers in the following functional
categories:

| | ADMIN | WARFARE | STRATEGIC | OTHER |
|---|---|---|---|---|
| % of users | 94.6% | 1.8% | .9% | 2.7% |

## Chief Warrant Officer - Line (Surface) (71XX)

Population: 1025    Mailed: 328    Sample: 213    Response rate: 64.9%
Sample of officers with more than 3 months in their jobs:    192

****
**COMPUTER USERS**
Of the 192 officers with more than 3 months in their jobs, 83.2 percent
(158) are using computers.  The following types of computers are being
used:

| | USE | How often used | Available, don't use |
|---|---|---|---|
| Microcomputer | 75.9% | Routinely to frequently (4.7) | 11.5% |
| Integrated real-time systems | 43.6% | Routinely to frequently (4.3) | 6.4% |
| Tactical systems | 23.8% | Routinely to frequently (4.3) | 11.6% |
| Technical work-stations | 19.8% | Occasionally to routinely (3.4) | 18.2% |
| Minicomputer | 18.5% | Routinely (3.9) | 13.8% |
| Mainframes | 18.0% | Occasionally to routinely (3.7) | 11.1% |
| Supercomputers | 3.2% | Almost never to occasionally (2.7) | 9.1% |

***
**PERCENTAGE OF OFFICERS DIRECTLY OR INDIRECTLY INVOLVED WITH COMPUTERS:**

| Uses Only | Uses and Supervises | Supervise Only | Average percent of day involved in computers |
|---|---|---|---|
| 8.9% | 74.2% | 12.1% | 28% |

***
**SOFTWARE BEING USED**
The following types and brands of software are being used by the 158
computer users:

| Type software | % of 158 using | Top brand used |
|---|---|---|
| Word processing | 84.8% | Wordperfect |
| Databases | 53.8% | DBASE |
| Graphics | 38.6% | Desktop Publishing Packages |
| Utilities | 38.6% | PC Tools |
| Spreadsheets | 28.5% | Lotus 123 |
| Interfaces | 16.5% | Windows |
| Communications | 12.7% | PROCOMM |
| Statistics | 1.3% | SPSSx/SAS |

***
**FUNCTIONAL AREAS**
The 158 computer users use their computers in the following functional
categories:

| | ADMIN | WARFARE | STRATEGIC | OTHER |
|---|---|---|---|---|
| % of users | 84.5% | 30.4% | 30.4% | 3.2% |

## <u>Chief Warrant Officer - Line (Submarine) (72XX)</u>

Population: 185    Mailed: 168    Sample: 112    Response rate: 66.7%
Sample of officers with more than 3 months in their jobs:    104

****
COMPUTER USERS
     Of the 104 officers with more than 3 months in their jobs, 83.7 percent
        (87) are using computers.  The following types of computers are being
        used:

| | USE | How often used | Available, don't use |
|---|---|---|---|
| Microcomputer | 81.7% | Routinely to frequently (4.7) | 11.5% |
| Integrated real-time systems | 26.2% | Occasionally to routinely (3.6) | 14.6% |
| Mainframes | 18.6% | Occasionally to routinely (3.7) | 17.6% |
| Tactical systems | 16.5% | Occasionally (2.9) | 14.6% |
| Technical work-stations | 13.9% | Occasionally (3.2) | 22.8% |
| Minicomputer | 13.5% | Routinely (3.9) | 23.1% |
| Supercomputers | 2.9% | Almost never (2.0) | 14.6% |

***
   PERCENTAGE OF OFFICERS DIRECTLY OR INDIRECTLY INVOLVED WITH COMPUTERS:

| Uses Only | Uses and Supervises | Supervise Only | Average percent of day involved in computers |
|---|---|---|---|
| 8.7% | 75.0% | 10.6% | 30% |

***
SOFTWARE BEING USED
   The following types and brands of software are being used by the 87
        computer users:

| Type software | % of 87 using | Top brand used |
|---|---|---|
| Word processing | 86.2% | Wordperfect |
| Databases | 60.7% | DBASE |
| Utilities | 42.5% | PC Tools |
| Spreadsheets | 40.2% | Lotus 123 |
| Graphics | 33.3% | Desktop Publishing Packages |
| Interfaces | 18.4% | Windows |
| Communications | 12.6% | PROCOMM/Other Packages |
| Statistics | 1.1% | SPSSx/SAS/Other Packages |

***
FUNCTIONAL AREAS
   The 87 computer users use their computers in the following functional
        categories:

| | ADMIN | WARFARE | STRATEGIC | OTHER |
|---|---|---|---|---|
| % of users | 85.1% | 13.8% | 21.8% | 5.7% |

## Chief Warrant Officer-Line (Aviation) (73XX)

Population:   534   Mailed:  275   Sample:  178   Response rate:  64.7%
Sample of officers with more than 3 months in their jobs:    165

****

**COMPUTER USERS**
   Of the 165 officers with more than 3 months in their jobs, 75.2 percent
      (124) are using computers.  The following types of computers are being
      used:

| | USE | How often used | Available, don't use |
|---|---|---|---|
| Microcomputer | 71.3% | Routinely to frequently (4.5) | 19.5% |
| Integrated real-time systems | 20.9% | Routinely (4.2) | 15.3% |
| Minicomputers | 17.2% | Occasionally to routinely (3.4) | 18.4% |
| Technical work-station | 14.7% | Occasionally (2.9) | 19.0% |
| Mainframes | 13.5% | Occasionally to routinely (3.5) | 16.6% |
| Tactical systems | 12.8% | Routinely (4.0) | 13.4% |
| Supercomputers | 3.1% | Almost never (2.2) | 14.4% |

***

**PERCENTAGE OF OFFICERS DIRECTLY OR INDIRECTLY INVOLVED WITH COMPUTERS:**

| Uses Only | Uses and Supervises | Supervise Only | Average percent of day involved in computers |
|---|---|---|---|
| 4.8% | 70.3% | 21.3 | 27% |

***

**SOFTWARE BEING USED**
   The following types and brands of software are being used by the 124
      computer users:

| Type software | % of 124 using | Top brand used |
|---|---|---|
| Word processing | 92.7% | Wordstar |
| Databases | 66.1% | DBASE |
| Spreadsheets | 58.9% | Lotus 123 |
| Graphics | 58.1% | Enable Graphics |
| Utilities | 50.8% | PC Tools |
| Interfaces | 26.6% | Windows |
| Communications | 20.2% | PROCOMM |
| Statistics | 0.8% | Other statistical packages |

***

**FUNCTIONAL AREAS**
   The 124 computer users use their computers in the following functional
      categories:

| | ADMIN | WARFARE | STRATEGIC | OTHER |
|---|---|---|---|---|
| % of users | 86.3% | 21.8% | 22.6% | 4.0% |

## <u>Chief Warrant Officer-Line (General) (74XX)</u>

Population:  564   Mailed: 280   Sample: 190   Response rate:  67.9%
Sample of officers with more than 3 months in their jobs:   174

****
COMPUTER USERS
   Of the 174 officers with more than 3 months in their jobs, 92.5 percent
      (161) are using computers.  The following types of computers are being
      used:

| | USE | How often used | Available, don't use |
|---|---|---|---|
| Microcomputer | 89.7% | Frequently to almost always (5.3) | 6.3% |
| Minicomputer | 29.8% | Routinely to frequently (4.3) | 11.7% |
| Technical work-station | 29.2% | Occasionally to routinely (3.5) | 14.0% |
| Integrated real-time systems | 28.5% | Frequently (4.8) | 9.3% |
| Mainframes | 28.1% | Routinely to frequently (4.3) | 14.0% |
| Tactical systems | 10.5% | Occasionally to routinely (3.4) | 7.0% |
| Supercomputers | 1.8% | Almost never to occasionally (2.3) | 8.8% |

***
 PERCENTAGE OF OFFICERS DIRECTLY OR INDIRECTLY INVOLVED WITH COMPUTERS:

| Uses Only | Uses and Supervises | Supervise Only | Average percent of day involved in computers |
|---|---|---|---|
| 9.7% | 82.8% | 6.3 | 43% |

***
SOFTWARE BEING USED
   The following types and brands of software are being used by the 161
      computer users:

| Type software | % of 161 using | Top brand used |
|---|---|---|
| Word processing | 91.3% | Wordperfect |
| Databases | 65.2% | DBASE |
| Graphics | 46.6% | Desktop Publishing |
| Utilities | 44.1% | PC Tools |
| Spreadsheets | 36.6% | Lotus 123 |
| Interfaces | 30.4% | Windows |
| Communications | 16.1% | PROCOMM |
| Statistics | - | - |

***
FUNCTIONAL AREAS
   The 161 computer users use their computers in the following functional
      categories:

| | ADMIN | WARFARE | STRATEGIC | OTHER |
|---|---|---|---|---|
| % of users | 91.3% | 21.1% | 31.1% | 9.3% |

## Chief Warrant Officer-Staff Corps (75XX)

Population:   265   Mailed:   204   Sample:   105   Response rate:   51.5%
Sample of officers with more than 3 months in their jobs:   100

****

**COMPUTER USERS**

Of the 100 officers with more than 3 months in their jobs, 76.8 percent (76) are using computers.  The following types of computers are being used:

| | USE | How often used | Available, don't use |
|---|---|---|---|
| Microcomputer | 72.7% | Frequently (4.9) | 9.1% |
| Minicomputer | 29.2% | Routinely (3.9) | 9.4% |
| Technical work-station | 28.1% | Occasionally to routinely (3.3) | 9.4% |
| Integrated real-time systems | 26.8% | Frequently to almost always (5.7) | 6.2% |
| Mainframes | 16.5% | Routinely to frequently (4.6) | 14.4% |
| Tactical systems | 4.2% | Frequently (5.0) | 10.4% |
| Supercomputers | 3.1% | Routinely to frequently (4.3) | 12.4% |

***

**PERCENTAGE OF OFFICERS DIRECTLY OR INDIRECTLY INVOLVED WITH COMPUTERS:**

| Uses Only | Uses and Supervises | Supervise Only | Average percent of day involved in computers |
|---|---|---|---|
| 11.1% | 65.7% | 8.1% | 34% |

***

**SOFTWARE BEING USED**

The following types and brands of software are being used by the 76 computer users:

| Type software | % of 76 using | Top brand used |
|---|---|---|
| Word processing | 84.2% | Wordperfect |
| Databases | 56.6% | DBASE |
| Spreadsheets | 46.1% | Lotus 123 |
| Graphics | 42.1% | Desktop Publishing |
| Utilities | 28.9% | PC Tools |
| Interfaces | 23.7% | Windows |
| Communications | 10.5% | Enable Communications |
| Statistics | - | - |

***

**FUNCTIONAL AREAS**

The 76 computer users use their computers in the following functional categories:

| | ADMIN | WARFARE | STRATEGIC | OTHER |
|---|---|---|---|---|
| % of users | 86.8% | 0 | 2.6% | 7.9% |

# Appendix C:  List of Functional Areas and Fields

1. ADMINISTRATIVE/MANAGEMENT/LOGISTICS SUPPORT

   a. Accounting
   b. Aviation logistics
   c. Budgeting
   d. Dental services
   e. Facilities construction
   f. Information resource management
   g. Inspector general
   h. Legal functions
   i. Maintenance
   j. Manpower, personnel, and training
   k. Medical services
   l. Occupational safety and health
   m. Operational safety
   n. Other logistics
   o. Payroll
   p. Plans and policies
   q. Platform construction, overhaul, modernization
   r. Procurement
   s. Religious services
   t. Resource programming
   u. Security assistance, technology transfer
   v. Station support
   w. Supply
   x. Transportation
   y. Other


2. WARFARE MISSION AREAS

   a. Anti-submarine warfare
   b. Amphibious warfare
   c. Anti-air warfare
   d. Anti-surface warfare
   e. Chemical warfare
   f. Command and control/$C^3I$
   g. Direct fleet support
   h. Electronic warfare
   i. Mine warfare
   j. Space warfare
   k. Special warfare
   l. Strategic warfare
   m. Strike air warfare
   n. Submarine anti-submarine warfare
   o. Surface anti-submarine warfare
   p. Other

3. <u>STRATEGIC/TACTICAL/OPERATIONAL SUPPORT</u>

   a. Calibration of weapons
   b. Communications
   c. Cryptology
   d. Diagnostic testing and maintenance
   e. Fire control
   f. Intelligence
   g. Mapping, charting, geodosy
   h. Meteorology
   i. Oceanography
   j. Reconnaissance
   k. Simulation
   l. Space technology
   m. Strategic planning
   n. Strike planning
   o. Surveillance
   p. Tactical training
   q. War gaming
   r. War planning
   s. Warning
   t. Weapon system training
   u. Other

4. <u>OTHER</u>

   a. Disaster relief coordination/planning
   b. Research, development, testing, evaluation
   c. Other